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FIRST LINES

OF THE

PRACTICE OF PHYSIC,

For the USE of STUDENTS in the UNIVERSITY of EDINBURGH.

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FIRST LINES

OF THE

PRACTICE OF PHYSIC.

PART II.

OF NEUROSES, OR NERVOUS DISEASES.

MXXXII.

IN a certain view, almoſt the whole of the diſeaſes of the human body might be called Nervous; but there would be no uſe for ſuch a general appellation; and, on the other hand, it ſeems improper to limit the term, in the looſe inaccurate manner in which it has been hitherto applied, to *hyſteric* and *hypochondriacal* diſorders, which are themſelves hardly to be defined with ſufficient preciſion.

MXXXIII.

In this place I propoſe to comprehend, under the title of NEUROSES, all thoſe preternatural affections of ſenſe or motion, which are without pyrexia as a part of the primary diſeaſe; and all thoſe which do not depend upon a topical affection of the organs, but upon a more general affection of the nervous ſyſtem, and of thoſe powers on which ſenſe and motion more eſpecially depend.

MXXXIV.

In this view I eſtabliſh a claſs of diſeaſes, under the title of NEUROSES or NERVOUS DISEASES. Theſe I again diſtinguiſh, as they conſiſt, either in the interruption and debility of the powers of ſenſe and motion, or in the irregularity with which theſe powers are exerciſed; and accordingly, I eſtabliſh four orders of this claſs, under the titles of *Comata*, *Adynamiae*, *Spaſmi*, and *Veſaniae*, to be defined, as we proceed to treat of them more particularly.

BOOK I.

OF COMATA.

MXXXV.

Under this title are comprehended thoſe affections which have been commonly called the Soporoſe diſeaſes; but they are moſt properly diſtinguiſhed by their conſiſting in ſome interruption or ſuppreſſion of the powers of ſenſe and voluntary motion, or of what are called the animal functions. Theſe are indeed uſually ſuſpended in the time of natural ſleep; but in all thoſe diſeaſes, ſleep, or even the appearance of it, is not conſtantly a ſymptom. Of theſe diſeaſes I can mark and properly explain two genera only, which come under the titles of *Apoplexy* and *Palſy*.

CHAPTER I.

OF APOPLEXY.

MXXXVI.

APOPLEXY is that diſeaſe in which the whole of the external and internal ſenſes, and the whole of the voluntary motions, are in ſome degree aboliſhed; while reſpiration and the action of the heart continue to be performed. By its being an affection of the *whole* of the powers of ſenſe and motion, we diſtinguiſh it from *Palſy;* and by its being with the continuance of reſpiration, and the action of the heart, it is diſtinguiſhed from *Syncope.* I have further added to the ordinary definition of apoplexy, that the abolition of the powers of ſenſe and motion is in *ſome degree* only;

meaning by this to imply, that, under the title of Apoplexy, are here comprehended thoſe diſeaſes which, as differing from it in degree only, cannot, with a view either to pathology or practice, be properly diſtinguiſhed from it. Such are the diſeaſes ſometimes treated of under the names of *Carus*, *Cataphora*, *Coma*, and *Lethargus*.

MXXXVII.

Apoplexy, in all its different degrees, moſt commonly affects perſons advanced in life, and eſpecially thoſe above ſixty years of age. It moſt uſually affects perſons of large heads and ſhort necks, perſons of a corpulent habit, perſons who have paſſed an indolent life, and uſed a full diet, and eſpecially thoſe who have indulged in frequent intoxication. Men who have long laboured under a frequent and copious diſcharge of blood from the hemorrhoidal veſſels, upon either the ſuppreſſion or ſpontaneous ceaſing of that diſcharge, are particularly liable to be affected with apoplexy.

MXXXVIII.

This diſeaſe frequently comes on very ſuddenly; but, in many caſes, it is preceded by various ſymptoms, as, by frequent fits of giddineſs, frequent headachs, a hemorrhagy from the noſe, ſome tranſitory interruptions of ſeeing and hearing, ſome falſe viſion and hearing, ſome tranſitory degree of numbneſs, or loſs of motion in the extremities, ſome faultering of the tongue in ſpeaking, a loſs of memory, a frequent drowſineſs, and frequent fits of incubus.

MXXXIX.

An attention to theſe ſymptoms, and to the prediſponent circumſtances, (MXXXVII.)

will often enable us to foreſee the more violent attacks of this diſeaſe.

MXL.

When the diſeaſe comes on to a conſiderable degree, it has been frequently obſerved to have been immediately induced by violent exerciſe; by a full and long continued inſpiration; by a fit of anger; by much external heat, eſpecially that ariſing from a crowded aſſembly of people; by warm bathing; by intoxication; by long ſtooping with the head down; and by a tight ligature about the neck. The diſeaſe has been remarked to make its attacks moſt frequently in the ſpring ſeaſon, and eſpecially when the vernal heat ſuddenly ſucceeds to the winter cold.

MXLI.

The ſymptoms denoting the preſence of this diſeaſe will be ſufficiently known from the definition given (MXXXVI.). Though the whole of the body is affected with the loſs of ſenſe and motion, it ſometimes take place more upon one ſide of the body than the other, and, in that caſe, the ſide leaſt affected with palſy is ſometimes affected with convulſions. In this diſeaſe there is often a ſtertorous breathing; and this has been ſaid to be a mark of the moſt violent ſtate of the diſeaſe; but it is not always× preſent even in the moſt complete form, or moſt violent degree of the diſeaſe.

MXLII.

The proximate cauſe of this diſeaſe may be, in general, whatever interrupts the motion of the nervous power, from the brain to the muſcles of voluntary motion, or from the ſentient extremities of the nerves to the brain.

× agreeable to Morgagni & others; but, in all the violent Apoplexies which I have seen, Stertor has always attended it.

MXLIII.

Such an interruption of the motion of the nervous power may be occaſioned, either *by ſome compreſſion of the origin of the nerves*, or *by ſomething deſtroying the mobility of the nervous power.* Both theſe cauſes we muſt treat of more particularly; and, firſt, of that of compreſſion, ſeemingly the moſt frequent occaſion of apoplexy, and, perhaps, the occaſion of all thoſe apoplexies ariſing from internal cauſes.

MXLIV.

The loſs of ſenſe and motion, in particular parts of the body, may be occaſioned by a compreſſion, either of the origin of certain nerves only, or of the ſame nerves in ſome part of their courſe from the brain to the organs of ſenſe and motion. Such caſes of partial compreſſion I am to take no further notice of here; for, as the affection I am to treat of now is general, it muſt depend upon a very general compreſſion of the origin of the nerves, or medullary portion of the brain; and, therefore, this only is to be conſidered here.

MXLV.

This compreſſion of the origin of the nerves, or medullary portion of the brain, may be produced in different ways, as,

1. By external violence fracturing and preſſing in, a part of the cranium.

2. By tumours, ſometimes ſoft, ſometimes bony, formed in different parts of the brain, or in its membranes, and becoming of ſuch a bulk as to compreſs the medullary ſubſtance of the brain.

3. By the blood accumulated in the blood-veſſels of the brain, and diſtending them to ſuch a degree as to compreſs the medullary portion of the brain, or the origin of the nerves.

4. By fluids effuſed in different parts of the brain, or into the cavity of the cranium, and accumulated in ſuch quantity as to occaſion the compreſſion we treat of.

And, as to this laſt, it is to be remarked here, that the fluids effuſed may be of two kinds, that is, they may be either a portion of the common maſs of blood poured out from red veſſels, or a portion of ſerum, or colourleſs fluid, poured out chiefly by exhalants.

MXLVI.

Of theſe ſeveral cauſes of compreſſion, the firſt is not to be conſidered here, becauſe the removing it does not belong to our province; and the conſideration of the ſecond may be omitted, as, in moſt inſtances, it is neither to be diſcerned nor cured by any art yet known. The third and fourth cauſes of compreſſion, as they are the moſt frequent, and are alſo moſt properly the ſubjects of our art, ſo they are thoſe which deſerve our particular attention; and we ſhall therefore endeavour to trace them further back in the ſeries of cauſes which may produce them.

MXLVII.

Both the ſtates of over diſtenſion, and of effuſion, may be produced by whatever increaſes the afflux and impetus of the blood in the arteries of the head, ſuch as violent exerciſe, a violent fit of anger, external heat applied, or any ſtrong preſſure upon the deſcending aorta.

MXLVIII.

But both theſe ſtates of over diſtenſion and of effuſion, ſeem to be more frequently produced by cauſes that operate by preventing the free return of the venous blood, from the veſſels of the head to the right ventricle of the heart.

MXLIX.

The venous veſſels of the brain are of a conformation and diſtribution ſo peculiar, as lead us to believe, that Nature intended to retard the motion of the blood, and accumulate it in theſe veſſels; and, therefore, even very ſmall additional reſiſtances to the motion of the blood from theſe, towards the right ventricle of the heart, may readily accumulate the blood in them ſtill more. Such accumulation will moſt readily happen in advanced life, when the venous ſyſtem, in general, is in a plethoric ſtate, and when this plethora takes place, eſpecially in the venous veſſels of the brain. It will, in like manner, be moſt apt to occur in perſons whoſe heads are large with reſpect to the reſt of the body, and in perſons of a ſhort neck, which is unfavourable to the return of the venous blood from the head. The accumulation of blood in the venous veſſels of the brain will alſo be moſt likely to occur in perſons of a corpulent habit, either becauſe theſe may be conſidered to be in a plethoric ſtate, or becauſe obeſity gives a compreſſion of the blood-veſſels in many parts of the body, and therefore fills thoſe of the brain, which are entirely free from ſuch kind of compreſſion.

ML.

Theſe are the circumſtances in the conſtitution of the body, which, producing a ſlower motion and return of the venous blood from the veſſels of the head, favour an accumulation and diſtenſion in them; and we now proceed to mention the ſeveral occaſional cauſes, which, in every perſon, may directly prevent the free return of the blood from the veſſels of the head towards the heart. Such are,

1. Stooping down with the head, or other ſituations of the body in which the head is long kept in a depending ſtate, and

in which the gravity of the blood increaſes the afflux of it by the arteries, and oppoſes the return of it by the veins.

2. A tight ligature about the neck, which compreſſes the veins more ſtrongly than the arteries.

3. Any obſtruction× of a conſiderable number of the veins carrying the blood from the head, and more eſpecially any conſiderable obſtruction of the aſcending vena cava.

4. Any conſiderable impediment of the free paſſage of the blood from the veins into the right ventricle of the heart; and it is commonly by this, and the immediately preceding circumſtance, that polypous concretions in the cava, or right ventricle, are found to occaſion apoplexy.

5. The return of blood from the veins of the head towards the heart, is eſpecially interrupted by every circumſtance that produces a more difficult tranſmiſſion of the blood through the veſſels of the lungs. It is

well

× As various steatomatous tumors of the Neck.

well known, that, at the end of every expiration, ſome interruption is given to the free tranſmiſſion of the blood through the lungs, and that this, at the ſame time, gives an interruption to the motion of the blood from the veins into the right ventricle of the heart. This clearly appears from that regurgitation of the blood in the veins which occaſions the alternate heaving and ſubſiding that is perceived in the brain of living animals, when the cranium is removed, and which is obſerved to be ſynchronous with the alternate motions of reſpiration.× From this we readily perceive, that, whatever occaſions a difficulty in the tranſmiſſion of the blood through the lungs, muſt alſo interrupt the free return of the venous blood from the veſſels of the head, and muſt therefore favour, and perhaps produce, an accumulation of blood, and an over diſtenſion in theſe veſſels.

It is further to be obſerved, that, as a very full inſpiration continued for any

× not with the Arteries, as formerly thought
ubsiding in Inspiration, & rising in Expiratio
hen the Lungs are in a collapsed state.

length of time, occaſions ſuch an interruption of the free tranſmiſſion of the blood through the lungs, as produces a ſuffuſion of face, and a manifeſt turgeſcence of the blood-veſſels of the head and neck; ſo every full and long continued inſpiration may occaſion an accumulation of blood in the veſſels of the head, to a very conſiderable degree. Thus, as every ſtrong exertion of the muſcular force of the body requires, and is attended with a very full and long continued inſpiration, we thence learn why the violent exertions of muſcular force have been ſo often the immediate or exciting cauſes of apoplexy.

It may alſo be remarked, that corpulency and obeſity ſeem to operate very much, by occaſioning a more difficult tranſmiſſion of the blood through the veſſels of the lungs. It appears that, in fat perſons, from the compreſſion of the blood-veſſels in many parts of the body, the veſſels of the lungs are thereby kept very full; ſo that, upon the leaſt increaſe of bodily motion, which ſends the blood faſter into the lungs, a more frequent and laborious reſpiration becomes, in ſuch perſons, immediately neceſſary. This ſhews that, in ſuch perſons, the blood is not freely tranſmitted through the lungs; a circumſtance which, as in other inſtances, muſt give a conſtant reſiſtance to the return of blood from the veſſels of the head, and therefore favour or occaſion an accumulation of blood in them.

Is the motion of the blood, in the veſſels of the head, rendered ſlower[x] by ſtudy, care, and anxiety?

MLI.

It is to be obſerved further, that theſe ſeveral cauſes (MXLVII.—ML.) of a preternatural fulneſs in the blood-veſſels of the brain, may produce apoplexy in diffe-

rent

X. I am not clear in it, & put it for your further consideration.

rent ways, according as the fulneſs takes place in the arteries or in the veins.

MLII.

Accordingly, *firſt*, the increaſed afflux of blood into the arteries of the brain, and an increaſed action in theſe, may either occaſion a rupture of their extremities, and thereby an effuſion of red blood producing compreſſion; or the ſame afflux and increaſed action may occaſion an increaſed exhalation from their extremities, of a ſerous fluid, which, if not as quickly reabſorbed, may ſoon accumulate in ſuch quantity as to produce compreſſion.

MLIII.

Secondly, The plethoric ſtate of the venous veſſels of the brain may operate in three different ways. 1. The fulneſs of the veins may give ſuch reſiſtance to the blood flowing into them from the arteries, as to determine the impetus of the blood to be ſo much greater upon the extremities of the arteries, as to occaſion a rupture of theſe, and conſequently an effuſion of red blood, or the *Haemorrhagia cerebri*, which HOFFMAN conſiders as a frequent cauſe of apoplexy, and which we have before explained in (DCCXLV.).

2. Whilſt the ſame reſiſtance to the blood flowing from the arteries into the veins, increaſes the impetus of the blood in the former, this may, without occaſioning rupture, increaſe the exhalation from their exhalant extremities, and produce an effuſion of a ſerous fluid, in the ſame manner as ſuch reſiſtance in the veins produces hydropic effuſions in other parts of the body.

3. If we may ſuppoſe, as no lymphatics have been yet diſcovered in the brain, that the ordinary abſorbents are not preſent there, and that the exhaled fluids are abſorbed or taken up by the extremities of

the veins, this will ſhew ſtill more clearly that a reſiſtance to the motion of the blood in the veins of the brain, may readily produce an accumulation of ſerous fluid in its cavities, and conſequently a compreſſion producing apoplexy.

MLIV.

Beſide theſe caſes of apoplexy from afflux in the arteries, or reſiſtance in the veins, an effuſion of ſerum may happen from two other cauſes. The one is a relaxation of the exhalants, as in other caſes of hydropic diatheſis prevailing in the body; and it is not unuſual for a general dropſy to end in apoplexy. The ſecond is an over proportion of watery parts in the maſs of blood, which is therefore ready to run off by the exhalants, as in the caſe of an iſchuria renalis, which, when it proves incurable, very commonly terminates in apoplexy.

MLV.

We have now mentioned the ſeveral cauſes of apoplexy depending upon compreſſion; and, from the whole, it will appear, that the moſt frequent of all theſe cauſes is a plethoric ſtate, or an accumulation and congeſtion of blood in the venous veſſels of the head, operating, according to its degree, in producing over diſtenſion or effuſion. The frequent operation of ſuch a cauſe will eſpecially appear from a conſideration of the prediſponent circumſtance (MXXXVII.), and from the antecedent (MXXXVIII.).

MLVI.

From the view I have now given of the cauſes of apoplexy, it will readily appear that there is a foundation for the common diſtinction of this diſeaſe into the two kinds, of Sanguine and Serous. But this diſtinction cannot be very uſefully applied in practice, as both kinds may often depend on the ſame cauſe, that is, a venous plethora, and, therefore, requiring very nearly the ſame method of cure. The only diſtinction of the apoplexies from compreſſion, properly to be made, is perhaps the diſtinction of ſerous apoplexy into that depending on the plethora mentioned (MXLIX.) and following; and that depending upon hydropic diatheſis, or an over proportion of water in the blood, (MLIV).; the former cauſes giving a proper idiopathic, the latter giving only a ſymptomatic diſeaſe.

MLVII.

Beſide the cauſes now mentioned, occaſioning apoplexy by compreſſion, I alledge there are other cauſes producing the ſame diſeaſe, by directly deſtroying the mobility of the nervous power. Such cauſes ſeem to be the mephitic air ariſing from fermenting liquors, and from many other ſources; the fumes ariſing from burning charcoal; the fumes of mercury, of lead, and of ſome other metallic ſubſtances; opium; alcohol; and many other narcotic poiſons. To all which I would add the power of cold, of concuſſion, of electricity, and of certain paſſions of the mind.

MLVIII.

None of theſe poiſons, or noxious powers, ſeem to kill by acting firſt upon the organs of reſpiration, or upon the ſanguiferous ſyſtem; and I believe their immediate and direct action to be upon the nervous power, deſtroying its mobility, becauſe the ſame poiſons ſhew their power in deſtroying the irritability of muſcles and of the nerves connected with them, when both theſe are entirely ſeparated from the reſt of the body.

MLIX.

It appears to me probable, that the apoplectic ſtate, in ſome degree accompanying, and almoſt always ſucceeding an epileptic paroxyſm, does not depend upon compreſſion, but upon a certain ſtate of immobility of the nervous power, produced by certain circumſtances in the nervous ſyſtem itſelf, which ſeem to be communicated from one part of the body to another, and at length to the brain.

MLX.

The ſame obſervation may be made with reſpect to many inſtances of hyſteric paroxyſm; and the circumſtances, both of epileptic and hyſteric paroxyſms, ending in coma, or a degree of apoplexy, lead me to think, that the apoplexy proceeding from retrocedent or atonic gout, is of the ſame kind, that is, it depends upon an immobility of the nervous power, and not upon compreſſion.

MLXI.

It may indeed happen, that the apoplectic and gouty prediſpoſition will often concur in the ſame perſon, and it may conſequently happen, that the apoplexy, coming upon gouty perſons, may depend upon compreſſion; and, therefore, upon diſſection, may diſcover the circumſtances of ſuch a cauſe preceding. But, in many caſes of apoplexy following a retrocedent or atonic gout, no ſuch antecedent or concomitant circumſtances, as commonly occur in caſes of compreſſion, do diſtinctly or clearly appear, while others preſent themſelves, which point out an affection of the nervous power alone.

MLXII.

MLXII.

With reſpect, however, to the circumſtances which may appear upon the diſſection of perſons dead of apoplexy, there may be ſome fallacy in judging from thoſe circumſtances of the cauſe of the diſeaſe. Whatever takes off or diminiſhes the mobility of the nervous power, may very much retard the motion of the blood in the veſſels of the brain, and that perhaps to the degree of increaſing exhalation, or even of occaſioning rupture and effuſion; ſo that, in ſuch caſes, the marks of compreſſion may appear, upon diſſection, though the diſeaſe had truly depended on cauſes deſtroying the mobility of the nervous power. This ſeems to be illuſtrated and confirmed from what occurs in many caſes of epilepſy. In ſome of theſe, after a repetition of fits, recovered from in the uſual manner, a fatuity is induced, which commonly depends upon a watery inundation of the brain; and in other caſes of epilepſy, when fits have been often repeated without any permanent conſequence, there happens at length a fatal paroxyſm, and, upon diſſection, it appears, that an effuſion of blood had happened. This, I think, is to be conſidered as a cauſe of death, not a cauſe of the diſeaſe; for, in ſuch caſes, I ſuppoſe that the diſeaſe had diminiſhed the action of the veſſels of the brain, and thereby given occaſion to a ſtagnation, which produced the appearances mentioned. And I apprehend the ſame reaſoning will apply to the caſes of retrocedent gout, which, by deſtroying the energy of the brain, may occaſion ſuch a ſtagnation as will produce rupture, effuſion, and death; although, in ſuch a caſe, the appearances, upon diſſection, might lead us to think that the apoplexy had depended upon compreſſion.

MLXIII.

The ſeveral cauſes mentioned in (MLVII.) are often of ſuch power as to occaſion immediate death, and therefore have not commonly been taken notice of, as affording inſtances of apoplexy; but, as the operation of the whole of theſe cauſes is ſimilar and analogous, and as, in moſt inſtances of the operation of theſe cauſes, an apoplectic ſtate is manifeſtly produced, there can be little doubt in conſidering moſt of the inſtances of their effects as caſes of apoplexy, and, therefore, ſuch as fall properly under our conſideration here.

MLXIV.

This diſeaſe of apoplexy is ſometimes entirely recovered from, but more frequently it ends in death, or in a hemiplegia. Even when an attack of the diſeaſe is recovered from, we generally find it diſpoſed to return; and the repeated attacks of it almoſt always, ſooner or later, bring on the events we have mentioned.

MLXV.

Theſe ſeveral events of health, death, or another diſeaſe, may be expected and foreſeen from a conſideration of the prediſponent circumſtances (MXXXVII.); of the antecedent ſymptoms (MXXXVIII.); of the exciting cauſes (MXL.); of the violence and degree of the ſymptoms when the diſeaſe has come on (MXLI.); of the duration of the diſeaſe×; and of the effects of the remedies employed.

MLXVI.

From the great danger attending this diſeaſe when it has come on (MLXIV.), it will readily appear that our care ſhould be chiefly directed to the prevention of it.

This

× after the third or fourth day is seldom fatal unless by the recurrence of another attack.

This I think may be often done by avoiding the remote ~~and~~ or exciting cauſes; and how this may be accompliſhed, will be obvious from the enumeration of thoſe cauſes given above (MXL.). But it will alſo appear from what is ſaid above, that the prevention of this diſeaſe will eſpecially depend upon obviating the prediſponent cauſe; and this ſeems, in moſt caſes, to be a plethoric ſtate of the blood-veſſels of the brain, which may be obviated by different means; and, in the firſt place, by a proper management of exerciſe and diet.

MLXVII.

The exerciſe ought to be ſuch as may ſupport the perſpiration, without heating the body, or hurrying reſpiration, and, therefore, commonly, by ſome mode of geſtation. In perſons not liable to frequent fits of giddineſs, and who are accuſtomed to riding on horſeback, this exerciſe is, of all others, the beſt. Walking, and ſome other modes of bodily exerciſe, may be employed with the reſtrictions juſt now mentioned; but, in old men, and in men of corpulent habits, bodily exerciſe ought always to be very moderate.

MLXVIII.

In perſons who pretty early in life ſhew the prediſpoſition to apoplexy, it is probable that a low diet, with a good deal of exerciſe, might entirely prevent the diſeaſe; but, in perſons who are advanced in life before they think of taking precautions, and are, at the ſame time, of a corpulent habit, which generally ſuppoſes their having been accuſtomed to full living, it might not be ſafe to put them upon a low diet; and it may be enough that their diet be rendered more moderate than uſual, eſpecially with reſpect to animal food; and that, at ſupper, ſuch food ſhould be abſtained from altogether.

In drinking, all heating× liquors are to be abſtained from, as much as former habits will allow, and the ſmalleſt approach to intoxication is to be carefully ſhunned. The large uſe of tobacco, in any ſhape, may be hurtful; and, except in caſes where it has been accuſtomed to occaſion a copious excretion from the head, the interruption of which might not be ſafe, the uſe of tobacco ſhould be avoided; and even in the circumſtance mentioned, where it may be in ſome meaſure neceſſary, the uſe of it ſhould at leaſt be rendered as moderate as poſſible. For ordinary draught, ſmall beer is to be preferred to plain water, as the latter is more ready to occaſion coſtiveneſs, which, in apoplectic habits, is to be carefully avoided.

MLXIX.

× all fermented & spirituous liquors; except Small Beer, which, from its not being a heating fermented liquor, I allow.

MLXIX.

Evacuations by ſtool may certainly contribute to relieve the plethoric ſtate of the veſſels of the head; and, upon an appearance of any unuſual turgeſcence in theſe, purging will be very properly employed; but, when no ſuch turgeſcence appears, the frequent repetition of large purging might weaken the body too much; and, for preventing apoplexy, it may, for the moſt part, be enough to keep the belly regular, and rather open, by gentle laxatives. In the ſummer ſeaſon, it may be uſeful to drink, every morning, of a gentle laxative mineral water,× but never in large quantity.

MLXX.

In the caſe of a plethoric ſtate of the ſyſtem, it might be ſuppoſed that blood-letting would be the moſt effectual means of diminiſhing the plethora, and of preventing

its

× Such as Harrowgate Cheltenham, or Scarborough Water.

its conſequences; and, when an attack of apoplexy is immediately threatened, blood-letting is certainly the remedy to be depended on, and blood ſhould be taken largely, if it can be done, from the jugular vein, or temporal artery. But, when no threatening turgeſcence appears, the obviating plethora is not judiciouſly attempted by blood-letting, as we have endeavoured to demonſtrate above (DCCXXI.). In ſuch circumſtances, leeches applied to the temples, or ſcarifications of the hind-head, may be more ſafe than general bleedings.

MLXXI.

When there are manifeſt ſymptoms of a plethoric ſtate in the veſſels of the head, a ſeton, or pea iſſue, near the head, may be very uſeful in obviating any turgeſcence of the blood.

MLXXII.

Theſe are the means to be employed for preventing the apoplexy which might ariſe from a plethoric ſtate of the veſſels of the brain; and if, at the ſame time, great care is taken to avoid the exciting cauſes (MXL.), theſe means will be generally ſucceſsful.

In the caſes proceeding from other cauſes (MLVII.), as their application is ſo immediately ſucceeded by the diſeaſe, they hardly allow any opportunity for prevention.

MLXXIII.

For the CURE of apoplexy from internal cauſes, the uſual violence and fatality of it require, that the proper remedies be immediately and largely employed.

The patient is to be kept as much as poſſible in ſomewhat of an erect poſture, and in cool air, and, therefore, neither in a warm chamber, nor covered with bedclothes, nor ſurrounded with a croud of people.

MLXXIV.

In all caſes of a full habit, and where the diſeaſe has been preceded by marks of a
position to a plethoric ſtate, blood-letting is to be immediately employed, and very largely. In my opinion, it will be moſt effectual when the blood is taken from the jugular vein; but, if that cannot be properly done, it may be taken from the arm. The opening of the temporal artery, when a large branch can be opened, ſo as ſuddenly to pour out a conſiderable quantity of blood, may alſo be an effectual remedy; but, in execution, it is more uncertain, and may be inconvenient. It may be, in ſome meaſure, ſupplied by cupping and ſcarifying on the temples or hind-head. This, indeed, ſhould ſeldom be omitted; and theſe ſcarifications

fications are always preferable to the application of leeches.

With reſpect to every mode of blood-letting, this is to be obſerved, that when, in any caſe of apoplexy, it can be perceived, that one ſide of the body is more affected with the loſs of motion than the other, the blood-letting, if poſſible, ſhould be made on the ſide oppoſite to that moſt affected.

MLXXV.

Another remedy to be employed is purging, to be immediately attempted by acrid glyſters,x and, at the ſame time, if any power of ſwallowing remain, by draſtic purgatives given by the mouth. Theſe however, leſt they may excite vomiting, ſhould be given in divided portions at proper intervals.

MLXXVI.

x ℞ Pil. e Colocynth. c. Aloe ʒiij Vin. Antimon. ʒiij Aq. Alex. S. ℥xij M. pro Enem.
The aforementioned is the glyster used by [illegible] Hintrinam.

MLXXVI.

Vomiting has been commended by ſome practitioners and writers; but, apprehending that this might impell the blood with too much violence into the veſſels of the head, I have never employed it.

MLXXVII.

Another remedy to be immediately employed is bliſtering; and I judge that this is more effectual when applied to the head, or near to it, than when it is applied to the lower extremities. This remedy I do not conſider as a ſtimulant, or capable of making any conſiderable revulſion; but, applied to the head, I ſuppoſe it uſeful in taking off the haemorrhagic diſpoſition ſo often prevailing there.

MLXXVIII.

MLXXVIII.

It has been uſual with practitioners, together with the remedies already mentioned, to employ ſtimulants of various kinds; but I am diſpoſed to think them generally hurtful; and they muſt be ſo, wherever the fulneſs of the veſſels, and the impetus of the blood in them is to be diminiſhed. Upon this principle, it is, therefore, agreed, that ſtimulants are abſolutely improper in what is ſuppoſed to be a ſanguine apoplexy, but they are commonly ſuppoſed to be proper in the ſerous. But, if we be right in alledging that this alſo commonly depends upon a plethoric ſtate of the blood-veſſels of the brain, ſtimulants muſt be equally improper in the one caſe as in the other.

MLXXIX.

It may be argued from the almoſt univerſal employment of ſtimulants, and ſometimes with ſeeming advantage, that they are not ſo hurtful as our notion of the cauſes of apoplexy leads us to ſuppoſe. But this argument is, in ſeveral reſpects, fallacious, and particularly in this, that, in a diſeaſe which, under every management, often proceeds ſo quickly to a fatal termination, the effects of remedies are not with certainty to be eaſily aſcertained.

MLXXX.

I have now mentioned the ſeveral remedies which I think adapted to the cure of apoplexy ariſing from compreſſion, and ſhould next proceed to treat of the cure of apoplexy ariſing from thoſes cauſes that directly deſtroy the mobility of the nervous power. But many of thoſe cauſes are often ſo powerful, and thereby ſo ſuddenly fatal in their effects, as hardly to allow of time for the uſe of remedies; and ſuch caſes have been ſo ſeldom the ſubjects of practice, that the proper remedies are not ſo well aſcertained as to enable me to ſay much of them here.

MLXXXI.

When, however, the application of the cauſes (MLVII.) is not ſo powerful as immediately to kill, and induces only an apoplectic ſtate, ſome efforts are to be made to obviate the conſequences, and to recover the patient; and even in ſome caſes where the cauſes referred to, from the ceaſing of the pulſe, and of reſpiration, and from a coldneſs coming upon the body, have induced an appearance of death; yet, if theſe appearances have not continued long, there may be means of recovering the perſons to life and health. I cannot, indeed, treat this ſubject completely; but, for the cure of apoplexy, from ſeveral of the cauſes mentioned (MLVII.), ſhall offer the following general directions.

1. When a poiſon capable of producing apoplexy has been recently taken into the ſtomach, if a vomiting ſpontaneouſly ariſes, it is to be encouraged, or if it does not ſpontaneouſly come on, a vomiting is to be immediately excited by art, in order that the poiſon may be thrown out as quickly as poſſible. If, however, the poiſon has been taken into the ſtomach long before its effects have appeared, we judge that, upon their appearance, the exciting of vomiting will be uſeleſs, and may, perhaps, be hurtful.

2. When the poiſon taken into the ſtomach, or otherwiſe applied to the body, has already induced an apoplectic ſtate, as thoſe cauſes do commonly at the ſame time occaſion a ſtagnation, or ſlower motion of the blood in the veſſels of the brain and of the lungs, ſo it will generally be proper to relieve this congeſtion by taking ſome blood from the jugular vein, or from the veins of the arm.

3. Upon the ſame ſuppoſition of a congeſtion in the brain or lungs, it will generally be proper to relieve it by means of acrid glyſters producing ſome evacuation from the inteſtines.

4. When theſe evacuations by blood-letting and purging have been made, the various ſtimulants which have been commonly propoſed in other caſes of apoplexy, may be employed here with more probability and ſafety. One of the moſt effectual means of rouſing apoplectics of this kind ſeems to be throwing cold water on ſeveral parts of the body, or waſhing the body all over with it.

5. When the poiſon producing apoplexy happens to be ſo powerful as very ſoon to occaſion the appearances of death above mentioned, yet if this ſtate has not continued long, the patient may often be recoverable, and the recovery is to be attempted by the ſame means that are directed to be employed for the recovery of drowned perſons, and which are now commonly known.

CHAP. II.

OF PALSY.

MLXXXII.

Palsy is a diſeaſe conſiſting in a loſs of the power of voluntary motion, but affecting certain parts of the body only, and by this it is diſtinguiſhed from apoplexy (MXXXVI.). One of the moſt frequent forms of palſy is when it affects the whole of the muſcles on one ſide of the body, and then the diſeaſe is named a *Hemiplegia.*

MLXXXIII.

The loſs of the power of voluntary motion may be owing either to a morbid affection of the muſcles, or organs of motion, by which they are rendered unfit for motion, or to an interruption of the influx of the nervous power into them, which is always neceſſary to the motions of thoſe that are under the power of the will. The diſeaſe, from the firſt of theſe cauſes, as conſiſting in an organic and local affection, we refer entirely to the claſs of local diſeaſes. I am here to conſider that diſeaſe only which depends upon the interrupted influx of the nervous power; and it is to this diſeaſe alone I would give the appellation of *Palſy*. A diſeaſe depending on an interrupted influx of the nervous power may indeed often appear as merely a local affection; but, as it depends upon an affection of the moſt general powers of the ſyſtem, it cannot be properly ſeparated from the ſyſtematic affections.

MLXXXIV.

MLXXXIV.

In palſy, the loſs of motion is often accompanied with a loſs of ſenſe; but, as this is not conſtantly the caſe, and as, therefore, the loſs of ſenſe is not an eſſential ſymptom of palſy, I have not taken it into my definition (MLXXXII.); and I ſhall not think it neceſſary to take any further notice of it in this treatiſe, becauſe, in ſo far as it is in any caſe a part of the paralytic affection, it muſt depend upon the ſame cauſes, and will be cured alſo by the very ſame remedies.

MLXXXV.

The palſy then, or loſs of motion, which is to be treated of here, may be diſtinguiſhed as of two kinds; one of them depending upon an affection of the origin of the nerves in the brain, and the other depending upon an affection of the nerves in ſome part of their courſe between the brain and the organs of motion. Of the latter, as appearing in a very partial affection, I am not to ſpeak particularly here, but ſhall treat of the more general paralytic affections, and eſpecially of the hemiplegia (MLXXXII.). At the ſame time, expecting that what I ſhall ſay upon this ſubject will readily apply to both the pathology and practice of the more limited caſes.

MLXXXVI.

The hemiplegia (MLXXXII.) uſually begins with, or follows a paroxyſm of apoplexy; and when the hemiplegia, after ſubſiſting for ſome time, becomes fatal, it is commonly by paſſing again into the ſtate of apoplexy. The relation, therefore, or affinity between the two diſeaſes, is ſufficiently evident, and is further ſtrongly confirmed by this, that the hemiplegia comes upon perſons of the ſame conſtitution, (MXXXVII.) and is preceded by the ſame ſymptoms (MXXXVIII.) that have been taken notice of with reſpect to apoplexy.

MLXXXVII.

When a fit of apoplexy has gone off, and there remains a ſtate of palſy appearing as a partial affection only, it might perhaps be ſuppoſed that the origin of the nerves is in a great meaſure relieved; but as, at the ſame time, there commonly remain the ſymptoms of loſs of memory, and of ſome degree of fatuity, theſe I think ſhew that the organ of intellect, or the common origin of the nerves, is ſtill conſiderably affected.

MLXXXVIII.

Thus, the hemiplegia, from its evident connection with, and near relation to apoplexy, may be properly conſidered as depending upon like cauſes; and, conſequently, either upon a compreſſion preventing the flow of the nervous power from the brain into the organs of motion, or upon the application of narcotic powers (MLVII.) rendering the nervous power unfit to flow in the uſual and proper manner. We begin with conſidering the caſes depending upon compreſſion.

MLXXXIX.

The compreſſion occaſioning hemiplegia may be of the ſame kind, and of all the different kinds that produce apoplexy, and therefore, either from tumour, over-diſtenſion, or effuſion. The exiſtence of tumour giving compreſſion, may often be better diſcerned in the caſe of palſy than in that of apoplexy, as its effects often appear, at firſt, in a very partial affection.

MXC.

The other modes of compreſſion, that is, of over diſtenſion and effuſion, may, and commonly do take place, in hemiplegia, and when they do, their operation here differs from that producing apoplexy, by its effects being partial, and on one ſide of the body only.

It may ſeem difficult to conceive that an over diſtenſion can take place in the veſſels on one ſide of the brain only, but it may be underſtood; and in the caſe of a palſy which is both partial and tranſitory, it is perhaps the only condition of the veſſels of the brain that can be ſuppoſed. In a hemiplegia, indeed, which ſubſiſts for any length of time, there is probably always an effuſion, either ſanguine or ſerous; but it is likely that even the latter muſt be ſupported by a remaining congeſtion in the blood-veſſels.

MXCI.

That a ſanguine effuſion can happen without becoming very ſoon general, and thereby occaſioning apoplexy and death, may alſo ſeem doubtful; but diſſections prove that in fact it does happen occaſioning palſy only; though it is true that this more commonly depends upon an effuſion of ſerous fluid, and of this only.

MXCII.

Can a palſy occaſioned by compreſſion remain, though the compreſſion be removed? x

MXCIII.

x I am much inclined to admit it.

MXCIII.

From what has been ſaid (MLXXXVI.), it will be obvious that the hemiplegia may be prevented by all the ſeveral means propoſed (MLXVI.--MLXXII.) for the prevention of apoplexy.

MXCIV.

Upon the ſame grounds, the Cure of palſy muſt be very much the ſame with that of apoplexy (MLXXIII.--MLXXX.), and when palſy has begun as an apoplexy, it is preſumed that, before it is to be conſidered as palſy, all thoſe ſeveral remedies have been employed. Indeed, even when it happens that, on the firſt attack of the diſeaſe, the apoplectic ſtate is not very complete, and that the very firſt appearance of the diſeaſe is as a hemiplegia, the affinity between the two diſeaſes (MLXXXVI.), is ſuch as to lead to the ſame remedies in both caſes. This is certainly proper in all thoſe caſes in which we can with much probability impute the diſeaſe to compreſſion; and it is indeed ſeldom that a hemiplegia comes on but with a conſiderable affection of the internal, and even of the external ſenſes, together with other marks of a compreſſion of the origin of the nerves.

MXCV.

Not only, however, where the diſeaſe can be imputed to compreſſion, but even where it can be imputed to the application of narcotic powers, if the diſeaſe come on with the appearances mentioned at the end of laſt paragraph, it is to be treated in the ſame manner as an apoplexy by (MLXXIII.—MLXXIX.)

MXCVI.

The cure of hemiplegia, therefore, on its firſt attack, is the ſame, or very nearly the ſame with that of apoplexy; and it ſeems requiſite that it ſhould be different only, 1. When the diſeaſe has ſubſiſted for ſome time. 2. When the apoplectic ſymptoms, or thoſe marking a conſiderable compreſſion of the origin of the nerves, are removed; and particularly, 3. When there are no evident marks of compreſſion, and it is at the ſame time known, that narcotic powers have been applied.

MXCVII.

In all theſe caſes, the queſtion ariſes, whether ſtimulants may be employed, or how far the cure may be entirely truſted to theſe remedies? Upon this queſtion, with reſpect to apoplexy, I have offered my o-

pinion

When a sanguine effusion cannot be expected.

pinion in (MLXXVIII.); and, with reſpect to hemiplegia, I am of opinion, that ſtimulants are equally dangerous as in the caſes of complete apoplexy, and particularly, 1. In all the caſes of hemiplegia, ſucceeding to a paroxyſm of complete apoplexy. 2. In all the caſes, coming upon perſons of the temperament mentioned in (MXXXVII.) and after the ſame antecedents as thoſe of apoplexy (MXXXVIII.); and, 3. In all the caſes, coming on with ſome apoplectic ſymptoms.

MXCVIII.

It is, therefore, in the caſes (MXCVI.) only, that ſtimulants are properly admiſſible; and even in the two firſt of theſe caſes, wherein a plethoric ſtate of the blood-veſſels of the brain may have brought on the diſeaſe; wherein a diſpoſition to that ſtate may ſtill continue; and wherein even ſome degree of congeſtion may ſtill remain; the uſe of ſtimulants muſt be an ambiguous remedy, ſo that perhaps it is in the third of theſe caſes only, that ſtimulants are clearly indicated and admiſſible.

MXCIX.

Theſe doubts, with reſpect to the uſe of ſtimulants, may perhaps be overlooked or diſregarded by thoſe who alledge that ſtimulants have been employed with advantage even in thoſes caſes (MXCVII.) in which I have ſaid they ought to be avoided.

MC.

To compromiſe this contrariety of opinion, I muſt obſerve, that, even in the caſes of hemiplegia depending upon compreſſion, although the origin of the nerves be ſo much compreſſed, as to prevent ſo full a flow of the nervous power, as is neceſſary to muſcular motion, yet it appears from the power of ſenſe ſtill remaining, that the nerves are, to a certain degree, ſtill pervious; and, therefore, it is poſſible that ſtimulants applied may excite the energy of the brain ſo much, as in ſome meaſure to force open the compreſſed nerves, and to ſhew ſome return of motion in paralytic muſcles. Nay, further, it may be allowed, that, if theſe ſtimulants be ſuch as act more upon the nervous than upon the ſanguiferous ſyſtem, they may poſſibly be employed without any very hurtful conſequence.

MCI.

But ſtill it will be obvious, that, although certain ſtimulants act chiefly upon the nervous ſyſtem, yet they alſo act always, in ſome meaſure, upon the ſanguiferous; ſo that, when they happen to have the latter effect in any conſiderable degree, they may certainly do much harm; and in a diſeaſe which they do not entirely cure, the miſchief ariſing from them may not be diſcerned.

MCII.

Whilſt the employment of ſtimulants is ſo often an ambiguous practice, we may perhaps go ſome length towards aſcertaining the matter, by conſidering the nature of the ſeveral ſtimulants which may be employed, and ſome of the circumſtances of their adminiſtration. With this view, therefore, I ſhall now mention the ſeveral ſtimulants that have been commonly employed, and offer ſome remarks upon their nature and uſe.

MCIII.

They are in the firſt place to be diſtinguiſhed as external or internal. Of the firſt kind we again diſtinguiſh them as they are applied to particular parts of the body only, or as they are more generally applied to the whole ſyſtem. Of the firſt kind are,

A. The concentrated acids of vitriol or nitre, involved, however, in oily or unctuous ſubſtances, which may obviate their corroſive, without deſtroying their ſtimulant power.

B. The volatile alkaline ſpirits, eſpecially in their cauſtic ſtate, but involved alſo in oils, for the purpoſes juſt now mentioned.

C. The ſame volatile ſpirits are frequently employed by being held to the noſe when they prove a powerful ſtimulus to the nervous ſyſtem; but it is, at the ſame time, probable, that they may prove a ſtrong ſtimulant x to the blood-veſſels of the brain.

D. A brine, or a ſtrong ſolution of ſea ſalt.

E. The eſſential oils of aromatic plants, a/ or of their parts.

F. The eſſential oils of turpentine, or of other ſuch reſinous ſubſtances. b/

G. The

x and on this account objected to by Morgagni.
a/ not of much use externally as I have seen.
b/ very powerful externally.

G. The diſtilled oils of amber, or of other bituminous foſſils.

H. The rectified empyreumatic oils of animal or vegetable ſubſtances.

I. Various vegetable acrids, particularly muſtard.

K. The acrid matter found in ſeveral inſects, particularly cantharides.

Some of theſe ſtimulants may be either applied in ſubſtance, or may be diſſolved in ardent ſpirits, by which their ſtimulant power may be increaſed, or more conveniently applied.

MCIV.

The greater part of the ſubſtances now enumerated ſhew their ſtimulant power by inflaming the ſkin of the part to which they are applied; and when their application is ſo long continued as to produce this effect, it interrupts the continuance of their uſe, and the inflammation of the part does not ſeem to do ſo much good, as the frequent repetition of a more moderate ſtimulus.

MCV.

Analogous to theſe ſtimulants is the ſtinging of nettles, which has been frequently commended.

Among the external ſtimulants, the mechanical one of friction with the naked hand, the fleſh bruſh, or flannel, is juſtly to be reckoned. Can the impregnation of the flannels to be employed, with the fumes of burning maſtic, olibanum, &c. be of any ſervice? ×

MCVI.

With reſpect to the whole of theſe external ſtimulants, it is to be obſerved, that they affect the part to which they are applied much more than they do the whole ſyſtem, and they are therefore indeed ſafer

× no effect, in my opinion.

fer in ambiguous caſes ; but, for the ſame reaſon, they are of leſs efficacy in curing a general affection.

MCVII.

The external applications which may be applied to affect the whole ſyſtem, are the powers of heat and cold, and of electricity.

Heat, as one of the moſt powerful ſtimulants of the animal oeconomy has been often employed in palſies, eſpecially by warm bathing. But, as both by ſtimulating the ſolids and rarefying the fluids, this proves a ſtrong ſtimulus to the ſanguiferous ſyſtem, it is often an ambiguous remedy, and has frequently been manifeſtly hurtful in palſies depending upon a congeſtion of blood in the veſſels of the brain. The moſt certain, and therefore, the moſt proper uſe of warm bathing in palſies, ſeems to be in thoſe that have been occaſioned by the application of narcotic powers. Are the natural baths more uſeful by the matters with which they may be naturally impregnated? ×

MCVIII.

Cold applied to the body for any length of time is always hurtful to paralytic perſons; but, if it be not very intenſe, nor the application long continued, and if, at the ſame time, the body be capable of a briſk reaction, ſuch an application of cold is a powerful ſtimulant of the whole ſyſtem, and has often been uſeful in curing palſy. But, if the power of reaction in the body be weak, any application of cold may prove very hurtful.

MCIX.

Electricity, in a certain manner applied, is certainly one of the moſt powerful ſtimulants that can be employed to act upon the nervous ſyſtem of animals; and, there-

× gave no answer to this query.

fore, much has been expected from it in the cure of palſy. But, as it ſtimulates the ſanguiferous, as well as the nervous ſyſtem, it has been often hurtful in palſies depending upon a compreſſion of the brain, and eſpecially when it has been ſo applied as to act upon the veſſels of the head. It is ſafer when its operation is confined to particular parts ſomewhat remote from the head; and, further, as the operation of electricity, when very ſtrong, can deſtroy the mobility of the nervous power, I am of opinion, that it is always to be employed with caution, and that it is only ſafe when applied with moderate force, and when confined to certain parts of the body remote from the head. It is alſo my opinion, that its good effects are to be expected from its repetition, rather than from its force, and that it is particularly ſuited to the cure of thoſe palſies which have been produced by the application of narcotic powers.

MCX.

Amongſt the remedies of palſy, the uſe of exerciſe is not to be omitted. In a hemiplegia, bodily exerciſe cannot be employed, and in a more limited affection, if depending upon a compreſſion of ſome part of the brain, it would be an ambiguous remedy; but, in all caſes where the exerciſes of geſtation can be employed, they are proper; as, even in caſes of compreſſion, the ſtimulus of ſuch exerciſe is moderate, and therefore ſafe; and, as it always determines to the ſurface of the body, it is a remedy in all caſes of internal congeſtion.

MCXI.

The internal ſtimulants employed in palſy are various, but chiefly the following.

a. The volatile alkaline ſalts, or ſpirits, as they are called, are very powerful and diffuſive ſtimulants, operating eſpecially on the nervous ſyſtem; and even although they operate on the ſanguiferous, yet, if given in frequently repeated ſmall, rather than in large doſes, their operation being tranſitory, is tolerably ſafe.

b. The vegetables of the claſs named Tetradynamia × are many of them powerful diffuſive ſtimulants; and, at the ſame time, as quickly paſſing out of the body, and, therefore, of tranſitory operation, they are often employed with ſafety. As they commonly prove diuretic, they may, in this way, alſo be of ſervice in ſome caſes of ſerous palſy.

c. The various aromatics, whether employed in ſubſtance, in tincture, or in their eſſential oils, are often powerful ſtimulants; but being more adheſive and inflammatory than thoſe laſt mentioned, they are, therefore, in all ambiguous caſes, leſs ſafe.

d. Some

× Mustard Horseradish &c.

d. Some other acrid vegetables have been employed, but we are not well acquainted with their peculiar virtues, or proper uſe.

e. Some reſinous ſubſtances, as guaiacum, and the terebinthinate ſubſtances, or their eſſential oils, have been, with ſome probability, employed, but they are apt to become inflammatory. Decoctions of guaiacum, and ſome other ſudorifics, have been directed to excite ſweating by the application of the fumes of burning ſpirit of wine in the laconicum,^x and have, in that way, been found uſeful.

f. Many of the foetid antiſpaſmodic medicines have been frequently employed in palſy; but I do not perceive in what manner they are adapted to the cure of this diſeaſe, and I have not obſerved their good effects in any caſes of it.

g. Bitters, and the Peruvian bark, have alſo been employed, but with no propriety or advantage that I can perceive.

x sweating box.

MCXII.

With reſpect to the whole of theſe internal ſtimulants, it is to be obſerved, that they ſeldom prove very powerful; and wherever there is any doubt concerning the nature or ſtate of the diſeaſe, they may readily do harm, and are often, therefore, of ambiguous uſe.

BOOK II.

OF ADYNAMIÆ;

OR,

DISEASES CONSISTING IN A WEAKNESS, OR LOSS OF MOTION, IN EITHER THE VITAL OR NATURAL FUNCTIONS.

CHAP. I.

OF SYNCOPE, OR FAINTING.

MCXIII.

THIS is a diſeaſe in which the pulſe and reſpiration become conſiderably weaker than uſual, or in which, for a certain time, theſe functions ceaſe altogether.

MCXIV.

MCXIV.

Phyſicians having obſerved that this affection occurs in different degrees, have endeavoured to diſtinguiſh theſe by different appellations; but, as it is not poſſible to aſcertain theſe different degrees with any preciſion, ſo there can be no ſtrict propriety in employing thoſe different names, and I ſhall here comprehend the whole of the affections of this kind under the title of Syncope.

MCXV.

This diſeaſe ſometimes comes on ſuddenly to a conſiderable degree, but ſometimes, alſo, it comes on gradually; and, in the latter caſe, it uſually comes on with a ſenſe of languor, and of anxiety about the heart, accompanied at the ſame time, or immediately after, with ſome giddineſs, dimneſs of ſight, and ſounding in the ears. Together with theſe ſymptoms, the pulſe and reſpiration become weak, and often ſo weak that the pulſe is ſcarcely to be felt, or the reſpiration to be perceived, and ſometimes theſe functions, for a certain time, ceaſe altogether. While theſe things happen, the face, and whole ſurface of the body, become pale, and in ſome meaſure cold, more or leſs, according to the degree and duration of the paroxyſm. Very commonly, at the beginning of this, and during its continuance, a cold ſweat appears, and, perhaps, continues on the fore-head, as well as on ſome other parts of the body. During the paroxyſm, the animal functions, both of ſenſe and motion, are always in ſome degree impaired, and very often entirely aboliſhed. A paroxyſm of ſyncope is often, after ſome time, ſpontaneouſly recovered; and this recovery is generally attended with a ſenſe of much anxiety about the heart.

MCXVI.

Fits of ſyncope are frequently attended with, or end in vomiting, and ſometimes with convulſions, or an epileptic fit.

MCXVII.

Theſe are the phaenomena in this diſeaſe; and, from every view of the greateſt part of theſe, there cannot be a doubt that the proximate cauſe of this diſeaſe is a very weak, or a total ceaſing of the action of the heart. But it may be a very difficult matter to explain in what manner the ſeveral remote cauſes operate in producing that proximate cauſe of it. This, however, I ſhall attempt, though with that diffidence which becomes me in attempting a ſubject that has not hitherto been treated with much ſucceſs.

MCXVIII.

The remote cauſes of ſyncope may, in the firſt place, be referred to two general heads. The one is, of thoſe cauſes exiſting and acting in the brain, or in parts of the body remote from the heart, but acting upon this by the intervention of the brain. The other general head of the remote cauſes of ſyncope, is of thoſe exiſting in the heart itſelf, or in parts very immediately connected with it, and thereby acting more directly upon it in producing this diſeaſe.

MCXIX.

In entering upon the conſideration of the firſt ſet of thoſe cauſes (MCXVIII.), I muſt aſſume a propoſition which I ſuppoſe to be fully eſtabliſhed in Phyſiology. It is this: That, though the muſcular fibres of the heart be endowed with a certain degree of inherent power, they are ſtill, for ſuch action as is neceſſary to the motion of the blood, very conſtantly dependent upon a nervous power ſent into them from the brain. At leaſt, this is evident, that there are certain powers acting primarily, and perhaps only in the brain, which influence, and variouſly modify the action of the heart. I ſuppoſe, therefore, a force very conſtantly, during life, exerted in the brain, with reſpect to the moving fibres of the heart, as well as of every part of the body, which force we ſhall call the Energy of the Brain, and which we ſuppoſe may be, on different occaſions, ſtronger or weaker with reſpect to the heart.

MCXX.

Admitting theſe propoſitions, it will be obvious, that, if we can explain in what manner the firſt ſet of remote cauſes (MCXVIII.)

(MCXVIII.) diminiſh the energy of the brain, we ſhall, at the ſame time, explain in what manner theſe cauſes occaſion a ſyncope.

MCXXI.

To do this, we obſerve, that one of the moſt evident of the remote cauſes of ſyncope is a haemorrhagy, or an evacuation of blood, whether ſpontaneous or artificial. And, as it is very manifeſt, that the energy of the brain depends upon a certain fulneſs and tenſion of its blood-veſſels, for which nature ſeems to have induſtriouſly provided by ſuch a conformation of thoſe blood-veſſels as retards the motion of the blood, both in the arteries and veins of the brain, ſo we can readily perceive, that evacuations of blood, by taking off the fulneſs and tenſion of the blood-veſſels of the brain, and thereby diminiſhing its energy, with reſpect to the heart, may occaſion a ſyncope.

In many perſons, a ſmall evacuation of blood will have this effect; and, in ſuch caſes, there is often a clear proof of the manner in which the cauſe operates, from this circumſtance, that the effect can be prevented by laying the body in a horizontal poſture, which, by favouring the afflux of the blood by the arteries, and retarding the return of it by the veins, preſerves the neceſſary fulneſs of the veſſels of the brain.

It is farther to be remarked here, that not only an evacuation of blood occaſions ſyncope, but that even a change in the diſtribution of the blood, whereby a larger portion of blood flows into one part of the ſyſtem of blood-veſſels, and, conſequently, leſs into others, may occaſion a ſyncope. It is thus we explain the ſyncope that readily occurs upon the evacuation of hydropic waters, which had before filled the cavities of the abdomen or thorax. It is thus, alſo, we explain the ſyncope that ſometimes happens on blood-letting, but which does not happen till the ligature which had been employed is untied, and admits a larger afflux of blood into the blood-veſſels of the arm. Both theſe caſes of ſyncope ſhew, that an evacuation of blood does not always occaſion the diſeaſe by any general effect on the whole ſyſtem, but often merely by taking off the requiſite fulneſs of the blood-veſſels of the brain.

MCXXII.

The operation of ſome others of the remote cauſes of ſyncope may be explained on the following principles. Whilſt the energy of the brain is, upon different occaſions, manifeſtly ſtronger or weaker, it ſeems to be with this condition, that a ſtronger exertion of it is neceſſarily followed by a weaker ſtate of the ſame. It ſeems to depend upon this particular in the conſtitution of the nervous power, that the ordinary contraction of a muſcle is always alternated with a relaxation of the ſame; that, unleſs a contraction proceeds to the degree of ſpaſm, the contracted ſtate cannot be long continued; and it ſeems to depend upon the ſame cauſe that the voluntary motions, which always require an unuſual increaſe of exertion, occaſion fatigue, debility, and, at length, irreſiſtible ſleep.

From this law, therefore, of the nervous power, we may underſtand why a ſudden and violent exertion of the energy of the brain is ſometimes followed by ſuch a diminution of it as to occaſion a ſyncope; and it is thus we ſuppoſe that a violent fit of joy produces ſyncope, and even death. It is upon the ſame principle, alſo, we ſuppoſe that an exquiſite pain may ſometimes excite the energy more ſtrongly than can be ſupported, and, therefore, ſuch a diminution follows as muſt occaſion fainting. But the effect of the principle appears more clearly in this, that a fainting readily happens upon the ſudden remiſſion of a conſiderable pain; and thus we have ſeen a fainting occur upon the reduction of a painful diſlocation.

MCXXIII.

It ſeems to be quite analogous when a ſyncope immediately happens on the finiſhing of any great and long continued effort, whether depending on the will, or upon a propenſity; and in this way a fainting ſometimes happens to a woman on the bearing of a child. This may be well illuſtrated by obſerving, that, in perſons already any how much weakened, even a very moderate effort will ſometimes occaſion fainting.

MCXXIV.

To explain the operation of ſome other cauſes of ſyncope, it may be obſerved, that, as the exertions of the energy of the brain are eſpecially under the influence of the will, ſo it is well known, that thoſe modifications of the will which are named paſſions and emotions, have a powerful influence on the energy of the brain, in its actions upon the heart, either in increaſing or diminiſhing the force of that energy. Thus, anger has the former, and fear the latter effect; and thence it may be underſtood how terror often occaſions a ſyncope, ſometimes of the moſt violent kind, named Aſphyxia, and ſometimes death itſelf.

MCXXV.

As, from what I have juſt mentioned, it appears that the emotions of deſire increaſe, and thoſe of averſion diminiſh the energy of the brain; ſo it may be underſtood, how a ſtrong averſion, a horror, or the feeling which ariſes upon the ſight of a very diſagreeable object, may occaſion fainting. As an example of this, I have known more than one inſtance of a perſon's fainting at the ſight of a ſore in another perſon.

MCXXVI.

To this head of horror and diſguſt, I refer the operation of thoſe odours which in certain perſons occaſion ſyncope. It may be ſuppoſed that thoſe odours are endowed with a directly ſedative power, and may thereby occaſion ſyncope; but they are, many of them, with reſpect to other perſons, evidently of a contrary quality; and it appears to me, that thoſe odours occaſion ſyncope only in thoſe perſons to whom they are extremely diſagreeable.

MCXXVII.

It is, however, very probable, that, among the cauſes of ſyncope, there are ſome, which, analogous to all thoſe we have already mentioned, act by a directly ſedative power; and ſuch may either be diffuſed in the maſs of blood, and thereby communicated to the brain, or may be only taken into the ſtomach, which ſo readily and frequently communicates its affections to the brain.

MCXXVIII.

Having now recited, and, as I hope, explained the moſt part of the remote cauſes of ſyncope, that either operate immediately upon the brain, or which, operating upon other parts of the body, are communicated to the brain, it is proper to obſerve, that the moſt part of theſe cauſes operate upon certain perſons more readily and powerfully than upon others; and this circumſtance, which may be conſidered as the prediſponent cauſe of ſyncope, deſerves to be inquired into.

It is, in the firſt place, obvious, that the operation of ſome of thoſe cauſes depends entirely upon an idioſyncraſy in the perſons upon whom they operate, which, however, I cannot pretend to explain. But, in the next place, with reſpect to the greater part of the other cauſes, their effects ſeem to depend upon a temperament which is, in one degree or other, in common to many perſons. This temperament ſeems to conſiſt in a great degree of ſenſibility and mobility, and theſe, again, ariſing from a ſtate of debility, ſometimes depending upon original conformation, and ſometimes produced by accidental occurrences in the courſe of life.

MCXXIX.

The *ſecond* ſet of the remote cauſes of ſyncope (MCXVIII.), or thoſe acting directly upon the heart itſelf, are, as we have ſaid, certain organic affections of the heart itſelf, or of the parts immediately connected with it, particularly the great veſſels which pour blood into, or immediately receive it from, the cavities of the heart. Thus a dilatation or aneuriſm of the heart, a polypus in its cavities, abſceſſes or ulcerations in its ſubſtance, a cloſe adherence of the pericardium to the ſurface of the heart, aneuriſms of the great veſſels near to the heart, polypus in theſe, and oſſifications in theſe, or in the valves of the heart, are one or other of them conditions which, upon diſſection, have been diſcovered in thoſe perſons who had before laboured under frequent ſyncope.

MCXXX.

It is obvious that theſe conditions are all of them either ſuch as may, upon occaſion, diſturb the free and regular influx into, or the free egreſs of the blood from, the cavities of the heart, or ſuch as may otherwiſe diſturb its regular action, by ſometimes interrupting it, or ſometimes exciting it to more violent and convulſive action. The latter is what we name the palpitation of the heart, and it commonly occurs in the ſame perſons who are liable to ſyncope.

MCXXXI.

It is this, as I judge, that leads us to perceive in what manner theſe organic affections of the heart and great veſſels may occaſion ſyncope; for it may be ſuppoſed, that the violent exertions made in palpitations may either give occaſion to an alternate great relaxation (MCXXII.), or to a ſpaſmodic contraction, and, in either way, ſuſpend the action of the heart, and occaſion ſyncope. It ſeems to me probable, that it is a ſpaſmodic contraction of the heart that occaſions the intermiſſion of the pulſe ſo frequently accompanying palpitation and ſyncope.

MCXXXII.

Though it frequently happens that palpitation and ſyncope ariſe, as we have ſaid, from the organic affections above mentioned, it is proper to obſerve, that theſe diſeaſes, even when in a violent degree, do not always depend on ſuch cauſes acting directly on the heart, but are often dependent on ſome of thoſe cauſes which we have mentioned above as acting primarily on the brain.

MCXXXIII.

I have thus endeavoured to give the pathology of ſyncope, and of the cure I can treat very ſhortly.

The caſes of ſyncope depending on the *ſecond* ſet of cauſes (MCXVIII.), and fully recited in (MCXXIX.), I ſuppoſe to be generally incurable, as our art, ſo far as I know, has not yet taught us to cure any one of thoſe ſeveral cauſes of ſyncope (MCXXIX.)

The caſes of ſyncope, depending on the firſt ſet of cauſes (MCXVIII.), and whoſe operation I have endeavoured to explain in (MCXXI. et ſeq.), I hold to be generally curable, either by avoiding the ſeveral occaſional cauſes there pointed out, or by correcting the prediſponent cauſes (MCXXVIII.). The latter, I think, may generally be done by correcting the debility or mobility of the ſyſtem, by the means which I have already had occaſion to point out in another place.

CHAP. II.

OF DYSPEPSIA, OR INDIGESTION.

MCXXXIV.

A WANT of appetite, a ſqueamiſhneſs, ſometimes a vomiting, ſudden and tranſient diſtenſions of the ſtomach, eructations of various kinds, heart-burn, pains in the region of the ſtomach, and a bound belly, are ſymptoms which frequently concur in the ſame perſon, and, therefore, may be preſumed to depend upon one and the ſame proximate cauſe. In both views, therefore, they may be conſidered as forming one and the ſame diſeaſe, to which we have given the appellation of DYSPEPSIA ſet at the head of this chapter.

MCXXXV.

As we ſhall ~~maintain~~ allow that this diſeaſe is often a ſecondary and ſympathic affection, ſo the ſymptoms above mentioned are often joined with many others; and this has given occaſion to a very confuſed and undetermined deſcription of it, under the general title of Nervous diſeaſes, or under that of Chronic weakneſs. It is proper, however, to diſtinguiſh, and we apprehend we have above enumerated, the ſymptoms that are eſſential to the Idiopathic affection we are to treat of.

MCXXXVI.

It is indeed to be particularly obſerved, that theſe ſymptoms are often truly accompanied with a certain ſtate of mind which may be conſidered as a part of the idiopathic affection; but I ſhall take no further notice of this ſymptom in the preſent chapter, as it will be fully, and more properly, conſidered in the next, which is under the title of Hypochondriaſis.

MCXXXVII.

That there is a diſtinct diſeaſe attended always with the greater part of the above ſymptoms, is rendered very probable by this, that all theſe ſeveral ſymptoms may ariſe from one and the ſame cauſe, that is, from an imbecility, loſs of tone, and weaker action in the muſcular fibres of the ſtomach; and I conclude, therefore, that this imbecility, may be conſidered as the proximate cauſe of the diſeaſe I am to treat of under the name of Dyſpepſia.

MCXXXVIII.

The imbecillity of the ſtomach, and the conſequent ſymptoms (MCXXXIV.), ~~may~~ do, however, frequently depend upon ſome organic affection of the ſtomach itſelf, as tumour, ulcer, or ſchirroſity, or upon ſome affection of other parts of the body communicated to the ſtomach, as in gout, amenorhoea, and ſome others. In both theſe caſes, however, the dyſpeptic ſymptoms are to be conſidered as ſecondary or ſympathic affections, to be cured only by curing the primary diſeaſe. Such ſecondary and ſympathic caſes cannot, indeed, be treated of here; but, as we preſume that the imbecility of the ſtomach may often take place without either any organic affection of this part, or any more primary affection in any other part of the body, ſo we ſuppoſe, and expect it will appear, from the conſideration of the remote cauſes, that the dyſpepſia may be often an idiopathic affection, and that it is, therefore, properly taken into the ſyſtem of methodical Noſology, and becomes the ſubject of our conſideration here.

MCXXXIX.

There can be little doubt, that, in moſt caſes, the weaker action of the muſcular fibres of the ſtomach, is the moſt frequent, and chief cauſe of the ſymptoms mentioned in (MCXXXIV.); but I dare not maintain it to be the only cauſe of idiopathic dyſpepſia. There is, pretty certainly, a peculiar fluid[x] in the ſtomach of animals, or, at leaſt, a peculiar quality in the fluids, that we know to be there, upon which the ſolution of the aliments taken into the ſtomach chiefly depends; and it is, at the ſame time, probable, that the peculiar quality of the diſſolving, or digeſting fluids, may be variouſly changed, or that their quantity may be, upon occaſion, diminiſhed.

[x] In proof of which see: Mr. Reaumur, John Hunter, & Dr. Stephens.

ed. But it is no leſs obvious, that a change in the quality or quantity of theſe fluids may produce a conſiderable difference in the phaenomena of digeſtion, and, particularly, may give occaſion to many of the morbid appearances mentioned in (MCXXXIV.).

MCXL.

This ſeems to be very well founded, and points out another proximate cauſe of dyſpepſia beſide that we have already aſſigned; but, notwithſtanding this, as the peculiar nature of the digeſtive fluid, the changes which it may undergo, or the cauſes by which it may be changed, are all matters ſo little known, that I can found no practical doctrine upon any ſuppoſition with reſpect to them; and as, at the ſame time, the imbecility of the ſtomach, either as cauſing the change in the digeſtive fluid, or as being cauſed by that change, ſeems always to be preſent, and to have a great ſhare in occaſioning the ſymptoms of indigeſtion, ſo I ſhall ſtill conſider the imbecillity of the ſtomach as the proximate, and almoſt ſole cauſe of dyſpepſia. And I more readily admit of this manner of proceeding, as, in my opinion, the doctrine applies very fully and clearly to the explaining the whole of the practice which experience has eſtabliſhed, as the moſt ſucceſsful in this diſeaſe.

MCXLI.

Conſidering this, then, as the proximate cauſe of dyſpepſia, I proceed to mention the ſeveral remote cauſes of this diſeaſe, as they are ſuch, as, on different occaſions, ſeem to produce a loſs of tone in the muſcular fibres of the ſtomach. They may, I think, be conſidered under two heads. The *firſt* is, of theſe, which act directly and immediately upon the ſtomach itſelf. The *ſecond* is, of theſe, which act upon the whole body, or particular parts of it, but, in conſequence of which, the ſtomach is chiefly, or almoſt only affected.

MCXLII.

Of the firſt kind are, 1. Certain ſedative, or narcotic ſubſtances, taken into the ſtomach, ſuch as tea, coffee, tobacco, ardent ſpirits, opium, bitters, aromatics, putrids, and aceſcents.

2. The large and frequent drinking of warm water, or of warm watery liquids.

3. Frequent ſurfeit, or immoderate repletion of the ſtomach.

4. Frequent vomiting, whether ſpontaneouſly ariſing, or excited by art.

5. Very frequent ſpitting, or rejection of ſaliva.

MCXLIII.

Thoſe cauſes which act upon the whole body, or upon particular parts and functions of it, are,

1. An indolent and ſedentary life.

2. Vexation of mind, and diſorderly paſſions of any kind.

3. Intenſe ſtudy, or cloſe application to buſineſs too long continued.

4. Exceſs in venery.

5. Frequent intoxication, which partly belongs to this head, partly to the former.

6. The being much expoſed to moiſt and cold air when without exerciſe.

Though the diſeaſe, as proceeding from the laſt ſet of cauſes, may be conſidered as a ſymptomatic affection only, yet, as the affection of the ſtomach is generally the firſt, ~~always~~ for the most part the chief, and often the only effect which theſe cauſes produce or diſcover, I think the affection of the ſtomach may be conſidered as the diſeaſe to be attended to in practice; and the more properly ſo, as, in many caſes, the general debility is only to be cured by reſtoring the tone of the ſtomach, and by remedies firſt applied to this organ.

MCXLIV.

For the cure of this diſeaſe we form three ſeveral indications, a preſervative, a palliative, and a curative.

The *firſt* is, to avoid or remove the remote cauſes juſt now enumerated.

The *ſecond* is, to remove thoſe ſymptoms which eſpecially contribute to aggravate and continue the diſeaſe; and

The *third* is, to reſtore the tone of the ſtomach, that is, to correct or remove the proximate cauſe of the diſeaſe.

MCXLV.

The propriety and neceſſity of the firſt indication is ſufficiently evident, as the continued application, or frequent repetition of thoſe cauſes, muſt continue the diſeaſe; may defeat the uſe of remedies; or, in ſpite of theſe, may occaſion the recurrence of the diſeaſe. It is commonly the neglect of this indication which renders this diſeaſe ſo frequently obſtinate. How the indication is to be executed, will be ſufficiently obvious from the conſideration of the ſeveral cauſes; but it is proper for the practitioner to attend to this, that the execution is often exceedingly difficult, becauſe it is not eaſy to engage men to break in upon eſtabliſhed habits, or to renounce the purſuit of pleaſure; and, particularly, to perſuade men that theſe practices are truly hurtful which they have often practiſed with ſeeming impunity.

MCXLVI.

The ſymptoms of this diſeaſe which eſpecially contribute to aggravate and continue it, and, therefore, require to be more immediately corrected, or removed, are, *firſt*, the crudities of the ſtomach, already produced by the diſeaſe, and diſcovered by a loſs of appetite, by a ſenſe of weight and uneaſineſs in the ſtomach, and, particularly, by the eructation of imperfectly digeſted matters.

Another ſymptom to be immediately corrected, is an unuſual quantity, or a higher degree than uſual, of acidity preſent in the ſtomach, diſcovered by various diſorders in digeſtion, and by other effects to be mentioned afterwards.

The *third* ſymptom aggravating the diſeaſe, and otherwiſe in itſelf urgent, is coſtiveneſs, and, therefore, conſtantly requiring to be relieved.

MCXLVII.

The *firſt* of theſe ſymptoms is to be relieved by exciting vomiting; and the uſe of this remedy, therefore, uſually and properly begins the cure of this diſeaſe. The vomiting may be excited by various means, more gentle or more violent. The former may anſwer the purpoſe of evacuating the contents of the ſtomach; but emetics, and vomiting, may alſo excite the ordinary action of the ſtomach; and both, by variouſly agitating the ſyſtem, and, particularly, by determining to the ſurface of the body, may contribute to remove the cauſes of the diſeaſe. But theſe latter effects can only be obtained by the uſe of emetics of the more powerful kind, ſuch as the antimonial emetics eſpecially are.

MCXLVIII.

MCXLVIII.

The *ſecond* ſymptom to be palliated, is an exceſs of acidity, either in quantity or quality, in the contents of the ſtomach. In man there is a quantity of aceſcent aliment almoſt conſtantly taken in, and, as I think, always undergoes an acetous fermentation there; and it is, therefore, that, in the human ſtomach, and in the ſtomachs of all animals uſing vegetable food, there is always found an acid preſent. This acid, however, is generally innocent, and occaſions no diſorder, unleſs either the quantity of it is very large, or the acidity proceeds to a higher degree than uſual. But, in either of theſe caſes, the acidity occaſions various diſorders, as flatulency, eructation, heart-burn, gnawing pains of the ſtomach, irregular appetites and cravings, looſeneſs, griping, emaciation, and debility. To obviate or remove theſe effects aggravating and continuing the diſeaſe, it is not only neceſſary to correct the acidity preſent in the ſtomach, but eſpecially as this acid proves a ferment, determining and increaſing the aceſcency of the aliments afterwards taken in, it is proper alſo, as ſoon as poſſible, to correct the diſpoſition to exceſſive acidity.

MCXLIX.

The acidity preſent in the ſtomach may be corrected × by the uſe of alcaline ſalts, or abſorbent earths, or by ſuch ſubſtances containing theſe, which can be decompoſed by the acid of the ſtomach. Of the alcalines, the cauſtic is more effectual than the mild; and this accounts for the effects of lime water. By employing abſorbents, we avoid the exceſs of alcali, which might ſometimes take place. The abſorbents are different, as they form a neutral more or leſs laxative; and hence the difference between magneſia alba and other abſorbents.

It

× Soap is also of great service.

It is to be obſerved, that alcalines and abſorbents may be employed to exceſs, as, when employed in large quantity, they may deprive the animal fluids of the acid neceſſary to their proper compoſition.

MCL.

The diſpoſition to acidity may be obviated by avoiding aceſcent aliments, and uſing animal food little capable of aceſcency. This, however, cannot be long continued without corrupting the ſtate of the fluids; and, as vegetable food cannot be entirely avoided, the exceſs of acidity may, in ſome meaſure, be avoided, by chooſing vegetable food the leaſt diſpoſed to a vinous fermentation, ſuch as leavened bread, and well fermented liquors, and, inſtead of freſh native acids, employing vinegar.

MCLI.

The acid ariſing from aceſcent matters, in a ſound ſtate of the ſtomach, does not proceed to any high degree, or is again ſoon involved, and made to diſappear; but this does not always happen; and a more copious acidity, or a higher degree of it, may be produced, either from a change in the digeſtive fluids, become leſs fit to moderate fermentation, and to cover acidity, or from their not being ſupplied in due quantity. How the former may be occaſioned we do not well underſtand; but we can readily perceive that the latter, perhaps the former alſo, may proceed from a weaker action of the muſcular fibres of the ſtomach. In certain caſes, ſedative paſſions, ſuddenly ariſing, occaſion the appearance of acidity in the ſtomach which did not appear before; and the uſe of ſtimulants often correct or obviate an acidity that would otherwiſe have appeared. From theſe conſiderations, we conclude, that the production and ſubſiſtence of acidity in the ſtomach, is to be eſpecially prevented by reſtoring and exciting the proper action of the ſtomach, by the ſeveral means to be mentioned hereafter.

MCLII.

But it is alſo to be further obſerved, that, though there are certain powers in the ſtomach for preventing a too copious acidity, or a high degree of it, they are not, however, ſufficient for deſtroying aceſcency, and covering the acidity altogether; and, therefore, as long as vegetable ſubſtances remain in the ſtomach, their aceſcency may go on and increaſe. From hence we perceive, that a ſpecial cauſe of the exceſs of acidity may be the too long retention of aceſcent matters in the ſtomach; whether this may be from theſe matters being of more difficult ſolution; or from the weakneſs of the ſtomach more ſlowly, diſcharging its contents into the duodenum, or from ſome impediment to the free evacuation of the ſtomach by the pylorus. The latter of theſe cauſes we are well acquainted with, in the caſe of a ſchirrous pylorus, producing commonly the higheſt degree of acidity. In all the inſtances of this ſchirroſity I have met with, I have found it incurable; but the firſt of theſe cauſes is to be obviated by avoiding ſuch aliments as are of difficult ſolution; and the ſecond is to be mended by the ſeveral remedies for exciting the action of the ſtomach, to be mentioned afterwards.

MCLIII.

The *third* ſymptom commonly accompanying dyſpepſia, which requires to be immediately removed, is coſtiveneſs. As there is ſo much connection between the ſeveral portions of the alimentary canal, with reſpect to the periſtaltic motion, that, if accelerated or retarded in any one part, the other parts of it are commonly affected in the ſame manner; Thus, as the briſker action of the ſtomach muſt accelerate the action of the inteſtines, ſo the ſlower action of the inteſtines muſt, in ſome meaſure, retard that of the ſtomach; It is, therefore, of conſequence to the proper action of the ſtomach, that the periſtaltic motion of the inteſtines, determining their contents downwards, be regularly continued, and that all coſtiveneſs or interruption of that determination be avoided. This may be done by the various means of exciting the action of the inteſtines; but it is to be obſerved here, that, as every conſiderable evacuation of the inteſtines weakens their action, and is ready, therefore, to induce coſtiveneſs when the evacuation is over; ſo theſe purgatives which produce a large evacuation, are unfit for correcting the habit of coſtiveneſs. This, therefore, ſhould be attempted by medicines, which do no more than ſollicit the inteſtines to a more ready diſcharge of their preſent contents, without either hurrying their action, or increaſing the excretions made into their cavity, either of which effects might produce a purging. There are, I think, certain medicines[x] peculiarly proper on this occaſion, as they ſeem to ſtimulate, eſpecially the great guts, and to act little on the higher parts of the inteſtinal canal.

MCLIV.

We have thus mentioned the ſeveral means of executing our ſecond indication; and I proceed to the *third*, which is, as we have ſaid, the proper curative, and it is, to reſtore the tone of the ſtomach, the loſs of which we conſider as the proximate cauſe of the diſeaſe, or at leaſt as the chief part of it. The means of ſatisfying this indication we refer to two heads. One is, of thoſe

[x] as Aloetics.

thoſe means which operate directly and chiefly on the ſtomach itſelf; and the other is, of thoſe means which operating upon the whole ſyſtem, have their tonic effects thereby communicated to the ſtomach.

MCLV.

The medicines which operate directly on the ſtomach, are either ſtimulants or tonics.

The ſtimulants are ſaline or aromatic.

The ſaline are acids or neutrals.

Acids of all kinds ſeem to have the power of ſtimulating the ſtomach, and, therefore, often increaſe appetite; but the native acids, as liable to fermentation, may otherwiſe do harm, and are therefore of ambiguous uſe. The acids, therefore, chiefly and ſucceſsfully employed, are the vitriolic, muriatic, and the diſtilled acid of vegetables, as it is found in tar-water, which are all of them antizymics.×

× Antifermentative.

The neutral ſalts anſwering this intention, are eſpecially thoſe which have the muriatic acid in their compoſition, though it is preſumed that neutrals of all kinds have more or leſs of the ſame virtue.

MCLVI.

The aromatics,× and perhaps ſome other acrids, certainly ſtimulate the ſtomach, as they obviate the aceſcency and flatulency of vegetable food; but their ſtimulus is tranſitory, and, if frequently repeated, and taken in large quantities, they may hurt the tone of the ſtomach.

MCLVII.

The tonics employed to ſtrengthen the ſtomach are bitters, bitters and aſtringents combined, or chalybeates.

Bitters are undoubtedly tonic medicines, both with reſpect to the ſtomach and the whole

× particularly Mustard.

whole ſyſtem; but their long continued uſe has been found to deſtroy the tone of the ſtomach, and of the whole ſyſtem; and, whether this is from the mere repetition of their tonic operation, or from ſome narcotic power, joined with the tonic in them, I am uncertain.

MCLVIII.

Bitters and aſtringents combined, are, probably, more effectual tonics than either of them taken ſingly; and we ſuppoſe ſuch a combination to take place in the Peruvian bark, which, therefore, proves a powerful tonic, both with reſpect to the ſtomach and to the whole ſyſtem. But I have ſome ground to ſuſpect, that the long continued uſe of this bark may, like bitters, deſtroy both the tone of the ſtomach and of the whole ſyſtem.

MCLIX.

Chalybeates may be employed as tonics in various forms, and in conſiderable quantities, with ſafety. They have been often employed in the form of mineral waters, and ſeemingly with ſucceſs; but whether this is owing to the chalybeate in the compoſition of theſe waters, or to ſome other circumſtances attending their uſe, I dare not poſitively determine; but the latter opinion ſeems to me the more probable.

MCLX.

The remedies which ſtrengthen the ſtomach, by being applied to the whole body, are exerciſe, and the application of cold.

As exerciſe ſtrengthens the whole body, it muſt alſo ſtrengthen the ſtomach; but it does this alſo in a particular manner, by promoting perſpiration, and exciting the action of the veſſels on the ſurface of the body, which have a particular conſent with the muſcular fibres of the ſtomach. This particularly explains why the exerciſes of geſtation, though not the moſt powerful in ſtrengthening the whole ſyſtem, are however very powerful in ſtrengthening the ſtomach, of which we have a remarkable proof in the effects of ſailing. In ſtrengthening the general ſyſtem, as fatigue muſt be avoided, ſo bodily exerciſe is of ambiguous uſe; and perhaps it is, thereby, that riding on horſeback x has been ſo often found to be one of the moſt powerful means of ſtrengthening the ſtomach, and thereby of curing dyſpepſia.

MCLXI.

The other general remedy of dyſpepſia, is the application of cold, which may be in two ways; that is, either by the application of cold air, or of cold water. It is probable, that, in the atmoſphere conſtantly ſurrounding our bodies, a certain degree of cold, conſiderably leſs than the tempe-

rature

x being a mixt of bodily exercise and Gestation.

rature of our bodies themſelves, is neceſſary to the health of the human body. Such a degree of cold ſeems to ſtrengthen the veſſels on the ſurface of the body, and therefore the muſcular fibres of the ſtomach. But further, it is well known, that, if the body is in exerciſe ſufficient to ſupport ſuch a determination to the ſurface, as to prevent the cold from producing any entire conſtriction of the pores; a certain degree of cold in the atmoſphere, with ſuch exerciſe, will render the perſpiration more conſiderable. From the ſharp appetite that in ſuch circumſtances is commonly produced, we can have no doubt, that, by the application of ſuch cold, the tone of the ſtomach is conſiderably ſtrengthened. Cold air, therefore, applied with exerciſe, is a moſt powerful tonic, with reſpect to the ſtomach; and this explains why, for that purpoſe, no exerciſes within doors, or in cloſe carriages, are ſo uſeful as thoſe in the open air.

MCLXII.

MCLXII.

From the ſame reaſoning, we can perceive that the application of cold water, or cold bathing, while it is a tonic, with reſpect to the ſyſtem in general, and eſpecially, as exciting the action of the extreme veſſels, muſt in both reſpects be a powerful means of ſtrengthening the tone of the ſtomach.

MCLXIII.

Theſe are the remedies to be employed towards a radical cure of idiopathic dyſpepſia; and it might be perhaps expected here, that I ſhould treat alſo of the various caſes of the ſympathic diſeaſe. But it will be obvious, that this cannot be properly done, without treating of all the diſeaſes of which the dyſpepſia is a ſymptom, which cannot be proper in this place. It has been partly done already, and will be further treated of in the courſe of this work. In the mean time, it may be proper to obſerve, that there is not ſo much occaſion for diſtinguiſhing between the idiopathic and ſympathic dyſpepſia, as there is in many other caſes of idiopathic and ſympathic diſeaſes. For, as the ſympathic caſes of dyſpepſia are owing to a loſs of tone in ſome other part of the ſyſtem, which is from thence communicated to the ſtomach; ſo the tone of the ſtomach reſtored, may be communicated to the part primarily affected; and, therefore, the remedies of the idiopathic may be often uſefully employed, and are often the remedies chiefly employed in ſympathic dyſpepſia.

MCLXIV.

Another part of our buſineſs here might be to ſay, how ſome other of the urgent ſymptoms, beſide thoſe above mentioned, are to be palliated. On this ſubject, I think it is enough to ſay, that the ſymptoms chiefly requiring to be immediately relieved, are flatulency, heart-burn, other kinds of pain in the region of the ſtomach, and vomiting.

The dyſpeptic are ready to ſuppoſe that the whole of their diſeaſe conſiſts in a flatulency. In this it will be obvious that they are miſtaken; but, although the flatulency is not to be entirely cured, but by mending the imbecility of the ſtomach by the means above mentioned; yet the flatulent diſtenſion of the ſtomach may be relieved by carminatives, as they are called, or medicines that produce a diſcharge of wind from the ſtomach, ſuch are the various antiſpaſmodics, of which the moſt effectual is the vitriolic aether.

The heart-burn may be relieved by abſorbents, antiſpaſmodics, or demulcents.

The other pains of the ſtomach may be ſometimes relieved by carminatives, but moſt certainly by opiates.

Vomiting is to be cured moſt effectually by opiates thrown by injection into the anus.×

CHAP.

×It being in vain to attempt giving
hem by the Mouth, as the Stomach will
not retain them.

CHAP. III.

Of HYPOCHONDRIASIS;

OR THE

HYPOCHONDRIAC AFFECTION,

Commonly called Vapours or Low Spirits.

MCLXV.

In certain perſons there is a ſtate of mind diſtinguiſhed by a concurrence of the following circumſtances: A languor, liſtleſſneſs, or want of reſolution and activity, with reſpect to all undertakings; a diſpoſition to ſeriouſneſs, ſadneſs, and timidity; as to all future events, an apprehenſion of the worſt, or moſt unhappy ſtate of them, and therefore, often upon ſlight grounds, an apprehenſion of great evil. Such perſons are particularly attentive to the ſtate of their own health, to every the ſmalleſt change of feeling in their bodies; and, from any unuſual feeling, perhaps of the ſlighteſt kind, they apprehend great danger, and even death itſelf. In reſpect to all theſe feelings and fears, there is commonly the moſt obſtinate belief and perſuaſion.

MCLXVI.

This ſtate of mind is the hypochondriaſiſm of medical writers; ſee Linnaei genera Morborum, Gen. 76. Sagari Syſtema Symptomaticum, Claſs XIII. Gen. V. The ſame ſtate of mind is, what has been commonly called *vapours* and *low ſpirits.* Though the term *vapours* may be founded on a falſe theory, and therefore improper, I beg leave for a purpoſe, that will immediately appear, to employ it for a little here.

MCLXVII.

Vapours, then, or the ſtate of mind deſcribed above, is like every other ſtate of mind, connected with a certain ſtate of the body; which muſt be inquired into, in order to its being treated as a diſeaſe by the art of phyſic.

MCLXVIII.

This ſtate of the body, however, is not very eaſily aſcertained; for we can perceive, that, on different occaſions, it is very different; vapours being combined ſometimes with dyſpepſia, ſometimes with hyſteria, and ſometimes with melancholia, which are diſeaſes ſeemingly depending on very different ſtates of the body.

MCLXIX.

The combination of vapours with dyſpepſia, is very frequent, and in ſeemingly very different circumſtances. It is, eſpecially, theſe different circumſtances that I would wiſh to aſcertain; and I remark, that the combination mentioned is manifeſtly in two different ſtates. Firſt, as it occurs in young perſons of both ſexes, of a ſanguine temperament, and of a lax and flaccid habit. Secondly, as it occurs in elderly perſons of both ſexes, of a melancholic temperament, and of a firm and rigid habit.

MCLXX.

Theſe two different caſes of the combination of vapours and dyſpepſia, I conſider as two diſtinct diſeaſes, to be diſtinguiſhed chiefly by the temperament prevailing in the perſons affected.

As the dyſpepſia of ſanguine temperaments is often without vapours, and as the vapours, when joined with dyſpepſia in ſuch temperaments, may be conſidered as, perhaps, always a ſymptom of the affection of the ſtomach; ſo to this combination of dyſpepſia and vapours, I would ſtill apply the appellation of DYSPEPSIA, and conſider it as purely the diſeaſe treated of in the preceding chapter.

But the combination of dyſpepſia and vapours, in melancholic temperaments, as the vapours, or the turn of mind peculiar to the temperament, nearly that deſcribed above in (MCLXIV.), are eſſential circumſtances of the diſeaſe; As this is often with few, or only ſlight ſymptoms of dyſpepſia, and, even though the latter be attending, as they ſeem to be rather the effects of the general temperament, than of any primary or topical affection of the ſtomach; I conſider this combination as a very different diſeaſe from the former and would apply to it ſtrictly the appellation of HYPOCHONDRIASIS.

MCLXXI.

Having thus pointed out a diſtinction between *Dyſpepſia* and *Hypochondriaſis*, I ſhall now, uſing theſe terms in the ſtrict ſenſe above mentioned, make ſome obſervations which may, I think, illuſtrate the ſubject, and more clearly and fully eſtabliſh the diſtinction propoſed.

MCLXXII.

The *Dyſpepſia* often appears early in life, and is frequently, alſo, much mended as life advances; but the *Hypochondriaſis* ſeldom appears early in life, and more uſually in more advanced years only; and more certainly ſtill, when it has once taken place, it goes on increaſing, as life advances to old age.

This ſeems to be particularly well illuſtrated, by our obſerving the changes in the ſtate of the mind which uſually take place in the courſe of life. In youth, the mind is chearful, active, raſh, and moveable; but, as life advances, the mind, by degrees, becomes more ſerious, ſlow, cautious, and ſteady, till, at length, in old age, the gloomy, timid, diſtruſtful, and obſtinate ſtate of melancholic temperaments, is more exquiſitely formed. In producing theſe changes, it is true, that moral cauſes have a ſhare; but it is, at the ſame time, obvious, that the temperament of the body determines the operation of theſe moral cauſes, ſooner or latter, and in a greater or leſſer degree, to have their effects. The ſanguine temperament retains longer the character of youth, while the melancholic temperament brings on more early the manners of old age.

MCLXXIII.

MCLXXIII.

Upon the whole, it appears, that the ſtate of mind which attends, and eſpecially diſtinguiſhes hypochondriaſis, is the effect of that ſame rigidity of the ſolids, torpor of the nervous power, and peculiar balance between the arterial and venous ſyſtems which occurs in advanced life, and which, at all times, takes place, more, or leſs in melancholic temperaments. If, therefore, there be alſo ſomewhat of a like ſtate of mind attending that dyſpepſia which occurs early in life, in ſanguine temperaments, and lax habits, it muſt depend upon a different ſtate of the body, and, probably, upon a weak and moveable ſtate of the nervous power.

MCLXXIV.

Agreeable to all this, in dyſpepſia, there is more of ſpaſmodic affection, and the affection of the mind (MCLXIV.) is often abſent, and, when preſent, is, perhaps, alway of a ſlighter kind; while, in *hypochondriaſis*, the affection of the mind is more conſtant, and the ſymptoms of dyſpepſia, or the affections of the ſtomach, are often abſent; or, when preſent, are in a ſlighter degree.

I believe the affection of the mind is commonly different in the two diſeaſes. In *dyſpepſia* it is often languor and timidity only, eaſily diſpelled, while, in *hypochondriaſis*, it is generally the gloomy and rivetted apprehenſion of evil.

The two diſeaſes are alſo diſtinguiſhed by ſome other circumſtances. *Dyſpepſia*, as we have ſaid, is often a ſymptomatic affection, while *hypochondriaſis* is, perhaps, always a primary and idiopathic diſeaſe.

As debility may be induced by many different cauſes, *dyſpepſia* is a frequent diſeaſe, while *hypochondriaſis*, depending upon a peculiar temperament, is more rare.

× in which case 'tis difficult to distinguish it from Melancholia.

MCLXXV.

Having thus endeavoured to diſtinguiſh the two diſeaſes, I ſuppoſe the peculiar nature and proximate cauſe × of *hypochondriaſis* will be underſtood; and I proceed therefore to treat of its cure.

So far as the affections of the body, and particularly of the ſtomach, are the ſame here as in the caſe of *dyſpepſia*, the method of cure might be ſuppoſed to be alſo the ſame; and accordingly the practice has been carried on with little diſtinction; but I am perſuaded that a diſtinction is often neceſſary.

MCLXXVI.

There may be a foundation here for the ſame preſervative indication as firſt laid down in the cure of *dyſpepſia* (MCXLIV.); but I cannot treat this ſubject ſo clearly or fully as I could wiſh; becauſe I have not yet had ſo

× owing solely to the temperament, which pro=
duces a torpor in the System, operating
especially on the primae viae.

much opportunity of obſervation as I think neceſſary to aſcertain the remote cauſes; and I can hardly make uſe of the obſervations of others, who have ſeldom or never diſtinguiſhed between the two diſeaſes. What, indeed, has been ſaid with reſpect to the remote cauſes of *melancholia*, will often apply to the *hypochondriaſis*, which I treat of; but the ſubject of the former has been ſo much involved in a doubtful theory, that I find it difficult to ſelect the facts that might properly and ſtrictly apply to the latter. I delay this ſubject, therefore, till another occaſion; but, in the mean time, truſt, that what I have ſaid regarding the nature of the diſeaſe, and ſome remarks I ſhall have occaſion to offer in conſidering the method of cure, may, in ſome meaſure, ſupply my deficiency on this ſubject of the remote cauſes.

MCLXXVII.

The *ſecond* indication laid down in the cure of *dyſpepſia* (MCXLIV.), has properly a place here; but it is ſtill to be applied with ſome diſtinction.

MCLXXVIII.

An anorexia and accumulation of crudities in the ſtomach, does not ſo commonly occur in *hypochondriaſis*, as in *dyſpepſia;* and, therefore, vomiting (MCXLVII.) is not ſo often neceſſary in the former as in the latter.

MCLXXIX.

The ſymptom of exceſs of acidity, from the ſlow evacuation of the ſtomach in melancholic temperaments, often ariſes to a very high degree in *hypochondriaſis* and, therefore,

fore, for the ſame reaſon as in (MCXLVIII.), it is to be obviated and corrected with the utmoſt care. It is, upon this account, that the ſeveral antacids, and the other means of obviating acidity, are to be employed in *hypochondriaſis*, and with the ſame attentions and conſiderations as in (MCLXIX. 40. and following), with this reflection, however, that the exciting the action of the ſtomach there mentioned, is to be a little differently underſtood, as ſhall be hereafter explained.

MCLXXX.

As coſtiveneſs, and that commonly to a conſiderable degree, is a very conſtant attendant of *hypochondriaſis*, ſo it is equally hurtful as in *dyſpepſia*. It may be remedied by the ſame means in the former as in the latter, and they are to be employed with the ſame reſtrictions as in (MCLIII.).

MCLXXXI.

MCLXXXI.

It is eſpecially with reſpect to the *third* indication laid down in the cure of *dyſpepſia* (MCXLIV. 3.), that there is a difference of practice to be obſerved in the cure of *hypochondriaſis*, and that often a directly oppoſite to that in the caſe of *dyſpepſia*, is to be followed.

MCLXXXII.

In *dyſpepſia*, the chief remedies × are the tonic medicines, which to me ſeem neither neceſſary nor ſafe in *hypochondriaſis*; for in this there is not a loſs of tone, but a want of activity, that is to be remedied.

Chalybeate mineral waters have commonly been employed in *hypochondriaſis*, and ſeemingly with ſucceſs. But this is probably to be imputed to the amuſement and exerciſe uſually accompanying the uſe of theſe waters, rather than to the tonic power of the ſmall quantity of iron which they contain.

MCLXXXIII.

× The Stimulants, mentioned in that Disease, are more proper in Hypochondriasis than the tonics, which are often ordered without any benefit.

MCLXXXIII.

Cold bathing is often highly uſeful to the dyſpeptic, and, as a general ſtimulant, may ſometimes ſeem uſeful to the hypochondriac, but it is not commonly ſo to the latter; while, on the other hand, warm bathing, hurtful to the dyſpeptic, is often extremely uſeful to the hypochondriac.

MCLXXXIV.

Another inſtance of a contrary practice neceſſary in the two diſeaſes, and illuſtrating their reſpective natures, is, that the drinking tea and coffee is always hurtful to the dyſpeptic, but is commonly extremely uſeful to the hypochondriac.

MCLXXXV.

Exerciſe, as it ſtrengthens the ſyſtem, and thereby the ſtomach, and more eſpecially as, by increaſing the perſpiration, it excites the action of the ſtomach, ſo it proves one of the moſt uſeful remedies in *dyſpepſia;* and, further, as, by the operation laſt mentioned, it excites the activity of the ſtomach, ſo, likewiſe, it proves an uſeful remedy in the *hypochondriaſis.* However, in the latter caſe, as I ſhall explain preſently, it is ſtill a more uſeful remedy by its operation upon the mind than by that upon the body.

MCLXXXVI.

It is now proper that we proceed to conſider the moſt important article of our practice in this diſeaſe, and which is, to conſider the treatment of the mind, an affection of which ſometimes attends *dyſpepſia*, but is always the chief circumſtance in *hypochondriaſis* What I am to ſuggeſt here will apply to both diſeaſes; but it is the *hypochondriaſis* that I am to keep moſt conſtantly in view.

MCLXXXVII.

MCLXXXVII.

The management of the mind, in hypochondriacs, is often nice and difficult. The firm perſuaſion that generally prevails in ſuch patients, does not allow their feelings to be treated as imaginary, nor their apprehenſion of danger to be conſidered as groundleſs, though the phyſician may be perſuaded that it is the caſe in both reſpects. Such patients, therefore, are not to be treated either by raillery or by reaſoning.

It is ſaid to be the manner of hypochondriacs to change often their phyſician, and, indeed, they often do it conſiſtently; for a phyſician who does not admit the reality of the diſeaſe, cannot be ſuppoſed to take much pains to cure it, or to avert the danger of which he entertains no apprehenſion.

If, in any caſe, the pious fraud of a placebo be allowable, it ſeems to be in treating hypochondriacs, who, anxious for relief, are fond of medicines, and, though often diſappointed, will ſtill take every new drug that can be propoſed to them.

MCLXXXVIII.

As it is the nature of man to indulge every preſent emotion, ſo the hypochondriac cheriſhes his fears, and, attentive to every feeling, finds in trifles, light as air, a ſtrong confirmation of his apprehenſions. His cure, therefore, depends eſpecially upon the interruption of his attention, or upon its being diverted to other objects than his own feelings.

MCLXXXIX.

Whatever averſion, to application of any kind, may appear in hypochondriacs, there is nothing more pernicious to them than abſolute idleneſs, or a vacancy from all earneſt purſuit. It is owing to wealth admitting of indolence, and leading to the purſuit of tranſitory and unſatisfying amuſements, or exhauſting pleaſures only, that the preſent times exhibit to us ſo many inſtances of hypochondriaciſm.

The occupations of buſineſs ſuitable to their circumſtances and ſituation in life, if neither attended with emotion, anxiety, nor fatigue, are always to be admitted, and adhered to by hypochondriacs. But occupations upon which a man's fortune depends, and which are always, therefore, objects of anxiety to melancholic men, and, more particularly, where ſuch occupations are expoſed to accidental interruptions, diſappointments, and failures, it is from theſe that the hypochondriac is certainly to be withdrawn.

MCXC.

The hypochondriac who is not neceſſarily, by circumſtances or habits, engaged in buſineſs, is to be drawn from his attention to himſelf by ſome amuſement.

The various kinds of ſport and hunting, as purſued with ſome ardor, and attended with exerciſe, if not too violent, are amongſt the moſt uſeful.

All thoſe amuſements which are in the open air, joined with moderate exerciſe, and requiring ſome dexterity, are generally of uſe.

Within doors, company which engages attention, which is willingly yielded to, and is, at the ſame time, of a chearful kind, will be always found of great ſervice.

Play, in which ſome ſkill is required, and where the ſtake is not an object of much anxiety, if not too long protracted, may often be admitted.

In dyſpeptics, however, gaming, liable to ſudden and conſiderable emotions, is dangerous, and the long continuance of it, with night-watching, is violently debilitating. But in melancholics, who commonly excell in ſkill, and are leſs ſuſceptible of violent emotions, it is more admiſſible, and is often

ten the only amuſement that can engage them.

Muſic, to a nice ear, is a hazardous amuſement, as long attention to it is very fatiguing.

MCXCI.

It frequently happens, that amuſements of every kind are rejected by hypochondriacs, and, in that caſe, mechanical means of interrupting thought are the remedies to be ſought for.

Such is to be found in briſk exerciſe, which requires ſome attention in the conduct of it.

Walking is ſeldom of this kind; though, as gratifying to the reſtleſſneſs of hypochondriacs, it has ſometimes been found uſeful.

The required interruption of thought is beſt obtained by riding on horſeback, or in driving a carriage of any kind.

The exerciſe of ſailing, except it be in an open boat, engaging ſome attention, does very little ſervice.

Exerciſe in an eaſy carriage, in the direction of which the traveller takes no part, unleſs it be upon rough roads, or driven pretty quickly, and with long continuance, is of little advantage.

MCXCII.

Whatever exerciſe be employed, it will be moſt effectual when employed in the purſuit of a journey; *firſt*, becauſe it withdraws a perſon from many objects of uneaſineſs and care which might preſent themſelves at home; *ſecondly*, as it engages in more conſtant exerciſe, and in a greater degree of it than is commonly taken in airings about home; and, *laſtly*, as it is conſtantly preſenting new objects which call forth a perſon's attention.

MCXCIII.

MCXCIII.

In our ſyſtem of Noſology, we have, next to *Hypochondriaſis*, placed the *Chloroſis*, becauſe I once thought it might be conſidered as a Genus, comprehending, beſides the Chloroſis or Amenorrhoea, ſome ſpecies of Cachexy; but, as I cannot find this to be well founded, and cannot diſtinctly point out any ſuch diſeaſe, I now omit conſidering Chloroſis as a Genus here; and, as a ſymptom of Amenorrhoea, I have endeavoured before to explain it under that title.

BOOK III.

OF SPASMODIC AFFECTIONS.

MCXCIV.

UNDER this title, I am to comprehend all the diſeaſes which conſiſt in *motu abnormi*, that is, in a preternatural ſtate of the contraction and motion of the muſcular or moving fibres in any part of the body.

MCXCV.

It will hence appear, why, under this title, I have comprehended many more diſeaſes than Sauvages and Sagar have comprehended under the title of Spaſmi, or than Linnaeus has done under the title of Motorii. But I expect it will be obvious, that, upon this occaſion, it would not be proper to confine our view to the affections of voluntary motion only; and if thoſe Noſologiſts have introduced into the claſs of Spaſmi, Palpitatio and Hyſteria, it will be, with equal propriety, that Aſthma, Colica, and many other diſeaſes, are admitted.

MCXCVI.

It has been hitherto the method of our Noſologiſts to divide the Spaſmi into the two orders of Tonici and Clonici, Spaſtici and Agitatorii, or, as many at preſent uſe the terms, into Spaſms, ſtrictly ſo called, and Convulſions. I find, however, that many, and, indeed, moſt of the diſeaſes to be conſidered under our title of Spaſmodic Affections, in reſpect of Tonic or Clonic contractions, are of a mixed kind; and, therefore, I cannot follow the uſual general diviſion, but have attempted another, by arranging the ſeveral Spaſmodic diſeaſes according as they affect the ſeveral functions, Animal, Vital, or Natural.

SECT. I.

OF THE
SPASMODIC AFFECTIONS
OF THE
ANIMAL FUNCTIONS.

MCXCVII.

Agreeable to the language of the antients, the whole of the diſeaſes to be treated of in this ſection, might be termed *Spaſmi;* and many of the moderns continue to apply the term in the ſame manner; but I think it convenient to diſtinguiſh the terms of *Spaſm* and *Convulſion*, by applying the former, ſtrictly, to what has been called the *Tonic*, and the latter, to what has been called the *Clonic Spaſm*.

There is certainly a foundation for the uſe of thoſe different terms, as there is a remarkable difference in the ſtate of the contraction of moving fibres upon different occaſions. This I have, indeed, pointed out before, in my treatiſe of Phyſiology, but muſt alſo repeat it here.

MCXCVIII.

In a ſtate of health, the contractions of the moving fibres are excited by the will, or by certain other cauſes appointed by Nature for exciting the exerciſe of the ſeveral functions of the animal oeconomy, and by the will, and by theſe cauſes only. The contractions produced are, in force and velocity, directed by the will, or by thoſe other cauſes which may be called *natural;* and theſe contractions are always ſoon ſucceeded by a ſtate of relaxation, and are not repeated, but when the cauſes we have mentioned are again applied.

MCXCIX.

But, in a morbid ſtate, the contractions are involuntary, and are excited by unuſual and unnatural cauſes; and the contractions produced may be in two different ſtates. The one is, when the contractions are to a violent degree, and are neither ſucceeded by a ſpontaneous relaxation, nor readily yield to an extenſion, either from the action of antagoniſt muſcles, or from other extending powers applied. This ſtate of contractions is what has been called a *Tonic Spaſm*, and what we name ſimply and ſtrictly a *Spaſm.* The other morbid ſtate of contractions is, when they are ſucceeded by a relaxation, but, at the ſame time, are repeated without the concurrence of the will, or the repetition of natural cauſes, and are, at the ſame time, repeated more frequently, and commonly more violently, than in a healthy ſtate. This ſtate of morbid contraction is what has been named a *Clonic*

Clonic Spaſm, and what we name, ſtrictly, a *Convulſion.*

In this ſection, we ſhall follow nearly the uſual diviſion of the Spaſmodic diſeaſes, into thoſe conſiſting in Spaſm, and thoſe conſiſting in Convulſion; but even here I cannot follow ſuch diviſion exactly.

CHAP. I.

OF TETANUS.

MCC.

Both Noſologiſts, and Practical Writers, have diſtinguiſhed Tetanic complaints into the ſeveral ſpecies of Tetanus, Opiſthotonos, and Emproſthotonos; and I have, in my Noſology, put the Triſmus, or Locked Jaw, as a Genus diſtinct from the Tetanus. All this, however, I now judge to be improper, and am of opinion, that all the ſeveral terms mentioned denote, and are applicable only to different degrees of one and the ſame diſeaſe; the hiſtory and cure of which I ſhall endeavour to deliver in this chapter.

MCCI.

Tetanic complaints may, from certain cauſes, occur in every climate that we are acquainted with; but they occur moſt frequently in the warmeſt climates, and moſt commonly in the warmeſt ſeaſons of ſuch climates. Theſe complaints affect all ages, ſexes, temperaments, and complexions. The cauſes from whence they commonly proceed, are cold and moiſture applied to the body while it is very warm, and eſpecially the ſudden viciſſitudes of heat and cold. Or, the diſeaſe is produced by punctures, lacerations, or other leſions of nerves, in any part of the body. There are, probably, ſome other cauſes of this diſeaſe; but they are neither diſtinctly known, nor well aſcertained. Though the cauſes mentioned do, upon occaſion, affect all ſorts of perſons, they ſeem, however, to attack perſons of middle age more frequently than the older or younger, the male ſex more frequently than the female, and the robuſt and vigorous, more frequently than the weaker.

MCCII.

If the diſeaſe proceed from cold, it commonly comes on in a few days after the application of ſuch cold; but, if it ariſe from a puncture, or other leſion of a nerve, the diſeaſe does not commonly come on for many days after the leſion has happened, very often when there is neither pain nor uneaſineſs remaining in the wounded or hurt part, and very frequently when the wound has been entirely healed up.

MCCIII.

The diſeaſe ſometimes comes on ſuddenly to a violent degree, but more generally, it approaches, by ſlow degrees, to its violent ſtate. In this caſe it comes on with a ſenſe of ſtiffneſs in the back part of the neck, which, gradually increaſing, renders the motion of the head difficult and painful. As the rigidity of the neck comes on and increaſes, there is commonly, at the ſame time, a ſenſe of uneaſineſs felt about the root of the tongue, which, by degrees, becomes a difficulty of ſwallowing, and, at length, an entire interruption of it. While the rigidity of the neck goes on increaſing, there ariſes a pain, often violent, at the lower end of the ſternum, and from thence ſhooting into the back. When this pain ariſes, all the muſcles of the neck, and, particularly thoſe of the back part of it, are immediately affected with ſpaſm, pulling the head ſtrongly backwards. At the ſame time, the muſcles that pull up the lower jaw, which, upon the firſt approaches of the diſeaſe, were affected with ſome ſpaſtic rigidity, are now generally affected with more violent ſpaſm, and ſet the teeth ſo cloſely together, that they do not admit of the ſmalleſt opening.

This is what has been named the *Locked Jaw*, and is often the principal part of the diſeaſe. When the diſeaſe has advanced thus far, the pain at the bottom of the ſternum returns very frequently, and with it the ſpaſms of the hind neck, and lower jaw, are renewed with violence, and much pain. As the diſeaſe thus proceeds, a greater number of muſcles come to be affected with ſpaſms. After thoſe of the neck, theſe along the whole of the ſpine become affected, bending the trunk of the body ſtrongly backwards; and this is what has been named the *Opiſthotonos*.

In the lower extremities, both the flexor and extenſor muſcles are commonly at the ſame time affected, and keep the limbs rigidly extended. Though the extenſors of the head and back are uſually the moſt ſtrongly affected, yet the flexors, or theſe muſcles of the neck that pull the head forward, and the muſcles that ſhould pull down the lower jaw, are often at the ſame time ſtrongly affected with ſpaſm. During the whole of the diſeaſe, the abdominal muſcles are violently affected with ſpaſm, ſo that the belly is ſtrongly retracted, and feels hard as a piece of board.

At length the flexors of the head and trunk become ſo ſtrongly affected as to balance the extenſors, and to keep the head and trunk ſtraight, and rigidly extended, incapable of being moved in any way; and it is to this ſtate the term of *Tetanus* has been ſtrictly applied. At the ſame time, the arms, little affected before, are now rigidly extended, the whole of the muſcles belonging to them being affected with ſpaſms, except thoſe that move the fingers, which often, to the laſt, retain ſome mobility. The tongue alſo long retains its mobility; but, at length, it alſo becomes affected with ſpaſms, which, attacking certain of its muſcles only, often thruſt it violently out between the teeth.

At the height of the diſeaſe, every organ of voluntary motion ſeems to be affected, and, amongſt the reſt, the muſcles of the face. The fore-head is drawn up into furrows; the eyes, ſometimes diſtorted, are commonly rigid, and immoveable in their ſockets; the noſe is drawn up, and the cheeks are drawn backwards towards the ears, ſo that the whole of the countenance expreſſes the moſt violent grinning. Under theſe univerſal ſpaſms, a violent convulſion commonly comes on, and puts an end to life.

MCCIV.

Theſe ſpaſms are every where attended with moſt violent pains. The utmoſt violence of ſpaſm is, however, not conſtant; but, after ſubſiſting for a minute or two, the muſcles admit of ſome remiſſion of their contraction, although of no ſuch relaxation as can allow the action of their antagoniſts. This remiſſion of contraction gives alſo ſome remiſſion of pain; but neither are of long duration. From time to time, the violent contractions and pains are renewed, ſometimes every ten or fifteen minutes, and that often without any evident exciting cauſe. But ſuch exciting cauſes frequently occur; for almoſt every attempt to motion, as attempting a change of poſture, endeavouring to ſwallow, and even to ſpeak, ſometimes gives occaſion to a renewal of the ſpaſms over the whole body.

MCCV.

The attacks of this diſeaſe are ſeldom attended with any fever. When the ſpaſms are general and violent, the pulſe is contracted, hurried, and irregular, and the reſpiration is affected in like manner; but, during the remiſſion, both the pulſe and reſpiration uſually return to their natural ſtate. The heat of the body is, commonly not increaſed; frequently, the face is pale, with a cold ſweat upon it; and, very often, the extremities are cold, with a cold ſweat over the whole body. When, however, the ſpaſms are frequent and violent, the pulſe is ſometimes more full and frequent than natural, the face is fluſhed, and a warm ſweat is forced out over the whole body.

MCCVI.

Although fever be not a conſtant attendant of this diſeaſe, eſpecially when ariſing from a leſion of nerves; yet, in thoſe caſes proceeding from cold, a fever ſometimes has ſupervened, and is ſaid to have been attended with inflammatory ſymptoms. Blood has been often drawn in this diſeaſe; but it never exhibits any inflammatory cruſt; and all accounts ſeem to agree, that the blood drawn ſeems to be of a looſer texture than ordinary, and that it does not coagulate in the uſual manner.

MCCVII.

In this diſeaſe, the head is ſeldom affected with delirium, or even confuſion of thought, till the laſt ſtage of it, when, by the repeated ſhocks of a violent diſtemper, every function of the ſyſtem is greatly diſordered.

MCCVIII.

It is no leſs extraordinary, that, in this violent diſeaſe, the natural functions are not either immediately or conſiderably affected. Vomitings, ſometimes, appear early in the diſeaſe, but, commonly, they are not continued; and it is uſual enough for the appetite of hunger to remain through the whole courſe of the diſeaſe; and what food happens to be taken down, ſeems to be regularly enough digeſted. The excretions are ſometimes affected, but not always. The urine is ſometimes ſuppreſſed, or is voided with difficulty and pain. The belly is coſtive; but, as we have hardly any accounts excepting of thoſe caſes in which opiates have been largely employed, it is uncertain whether the coſtiveneſs has been the effect of the opiates or of the diſeaſe. In ſeveral inſtances of this diſeaſe, a miliary eruption has appeared upon the ſkin; but whether this be a ſymptom of the diſeaſe, or the effect of a certain treatment of it, is undetermined. In the mean while, it has not been obſerved to denote either ſafety or danger, or to have any effect in changing the courſe of the diſtemper.

MCCIX.

This diſeaſe has generally proved fatal; and this, indeed, may be juſtly ſuppoſed to be the conſequence of its nature; but, as we know that, till very lately, phyſicians were not well acquainted with a proper method of cure; and that ſince a more proper method has been known and practiſed, many have recovered from this diſeaſe. It may be concluded, therefore, that the fatal tendency of it is not ſo unavoidable as has been imagined.

In judging of the tendency of this diſeaſe, in particular caſes, we may remark, that, when ariſing from leſions of the nerves, it is commonly more violent, and of more difficult cure than when proceeding from cold; that the diſeaſe which comes on ſuddenly, and advances quickly to a violent degree, is always more dangerous than that which is ſlower in its progreſs. Accordingly, the diſeaſe often proves fatal before the fourth day; and, when a patient has paſſed this period, he may be ſuppoſed to be in greater ſafety, and, in general, the diſeaſe is the ſafer, the longer it has continued. It is, however, to be particularly obſerved, that, even for many days after the fourth, the diſeaſe continues to be dangerous; and, even after ſome conſiderable abatement of its force, it is ready to recur again with its former violence and danger. It never admits of any ſudden, or what may be called a critical ſolution, but always recedes, by degrees only; and it is often very long before the whole of the ſymptoms diſappear.

MCCX.

From the hiſtory of the diſeaſe now deſcribed, it will be evident, that there is no room for diſtinguiſhing the *tetanus opiſthotonos*, and *triſmus*, or *locked jaw*, as different ſpecies of diſeaſe, ſince they all ariſe from the ſame cauſes, and are almoſt conſtantly conjoined in the ſame perſon. I have no doubt that the *emproſthotonos* belongs alſo to the ſame ſpecies, and, as the antients have frequently mentioned it, we can have no doubt of its having occurred;

red; but, at the ſame time, it is certainly in theſe days a rare occurrence; and, as I have never ſeen it, nor find any hiſtories in which this particular ſtate of the ſpaſms is ſaid to have prevailed, I cannot mention the other circumſtances which particularly attend it, and may diſtinguiſh it from the other varieties of tetanic complaints.

MCCXI.

This diſeaſe has put on ſtill a different form from any of thoſe above mentioned. The ſpaſms have been ſometimes confined to one ſide of the body only, and which bend it ſtrongly to that ſide. This is what has been named by Sauvages the *Tetanus Lateralis*, and by ſome late writers, the *Pleuroſthotonos*. This form of the diſeaſe has certainly appeared very ſeldom; and in any of the accounts given of it, I cannot find any circumſtances that would lead me to conſider it as any other than a variety of the ſpecies already mentioned, or to take further notice of it here.

MCCXII.

The pathology of this diſeaſe, I cannot, in any meaſure, attempt, as the ſtructure of moving fibres, the ſtate of them under different degrees of contraction, and particularly the ſtate of the ſenſorium, as variouſly determining the motion of the nervous power, are all matters very imperfectly, or not at all known to me. In ſuch a ſituation, therefore, the endeavouring to give any rules of practice, upon a ſcientific plan, appears to me vain and fruitleſs; and, towards directing the cure of this diſeaſe, we muſt be ſatisfied with having learned ſomething uſeful from analogy, confirmed by experience.

MCCXIII.

When the diſeaſe is known to ariſe from the leſion of a nerve in any part of the body, the firſt, and, as I judge, the moſt important ſtep to be taken towards the cure, is, by every poſſible means to cut off that part from all communication with the ſenſorium, either by cutting through the nerves in their courſe, or perhaps by deſtroying, to a certain length, their affected part or extremity.

MCCXIV.

When the cure of the diſeaſe is to be attempted by medicine, experience has taught us that opium has often proved an effectual remedy; but that, to render it ſuch, it muſt be given in much larger quantities than have been employed in any other caſe; and, in theſe larger quantities, it may, in this diſeaſe, be given more ſafely than the body has been known to bear in any other condition.× The practice has been, to give the opium either in a ſolid or a liquid form, not in any very large doſe at once, but in moderate

× except perhaps in Rabies Canina, where I have known ℥ſs of Opium given for a Dose, after the exhibition of smaller ones had failed.

derate doſes, frequently repeated, at the interval of one, two, three, or more hours, as the violence of the ſymptoms ſeem to require. Even when large quantities have been given in this way, it appears that the opium does not operate here in the ſame manner as in moſt other caſes; for, though it procure ſome remiſſion of the ſpaſms and pains, it hardly induces any ſleep, or occaſions that ſtupor, intoxication, or delirium, which it often does in other circumſtances, when much ſmaller quantities only have been given. It is, therefore, very properly obſerved, that, in tetanic affections, as the opium ſhows none of thoſe effects by which it may endanger life, there is little or no reaſon for being ſparing in the exhibition of it, and it may be given, probably ſhould be given, as largely, and as faſt as the ſymptoms of the diſeaſe may ſeem to demand.

It is particularly to be obſerved, that, though the firſt exhibitions of the opium may have produced ſome remiſſion of the ſymptoms; yet the effects of opium do not long continue in the ſyſtem×; and this diſeaſe being, for ſome time, ready to recur, it is commonly very neceſſary, by the time that the effects of the opium given may be ſuppoſed to be wearing off; and eſpecially upon the leaſt appearance of a return of the ſpaſms, to repeat the exhibition of the opium in the ſame quantities as before. This practice is to be continued while the diſeaſe continues to ſhew any diſpoſition to return; and it is only after the diſeaſe has already ſubſiſted for ſome time, and when conſiderable and long continued remiſſions have taken place, that the doſes of the opium may be diminiſhed, and the intervals of exhibiting them be more conſiderable.

MCCXV.

The adminiſtering of opium in this manner has, in many caſes, been ſucceſsful, and, pro-

bably,

× not above eight hours in general, and at farthest twelve hours.

bably, would have been equally ſo in many others, if the opium had not been too ſparingly employed, either from the timidity of practitioners, or from its exhibition being prevented, by that interruption of deglutition which ſo often attends this diſeaſe. This latter circumſtance directs, that the medicine ſhould be immediately and largely employed, upon the firſt approach of the diſeaſe, before the deglutition becomes difficult; or that, if this opportunity be loſt, the medicine, in ſufficient quantity, and with due frequency, ſhould be thrown into the body by glyſter; which, however, does not ſeem to have been hitherto often practiſed.

MCCXVI.

It is highly probable, that, in this diſeaſe, the inteſtines are affected with the ſpaſm that prevails ſo much in other parts of the ſyſtem, and, therefore, that coſtiveneſs

neſs occurs here as a ſymptom of the diſeaſe. It is probably, alſo, increaſed by the opium, which is here ſo largely employed; and, from whichever of theſe cauſes it ariſes, it certainly muſt be held to aggravate the diſeaſe, and that a relaxation of the inteſtinal canal will contribute to a relaxation of the ſpaſms elſewhere. This conſideration directs the frequent exhibition of laxatives while the power of deglutition remains, or the frequent exhibition of glyſters, when it does not; and the good effects of both have been frequently obſerved.

MCCXVII.

It has been with ſome probability ſuppoſed, that the operation of opium, in this diſeaſe, may be much aſſiſted, by joining with it ſome other of the moſt powerful antiſpaſmodics. The moſt promiſing are muſk and camphire; and ſome practitioners have been of opinion, that the former has proved very uſeful in tetanic complaints. But, whether it be from its not having been employed of a genuine kind, or in ſufficient quantity, the great advantage and propriety of its uſe, are not yet clearly aſcertained. It appears to me probable, that, analogous to what happens with reſpect to opium, both muſk and camphire, might be employed in this diſeaſe, in much larger quantities, than they commonly have been in other caſes.

MCCXVIII.

Warm bathing has been commonly employed as a remedy in this diſeaſe, and often with advantage; but, ſo far as I know, it has not alone proved a cure; and, in ſome caſes, whether it be from the motion of the body here required, exciting the ſpaſms, or from the fear of the bath, which ſome perſons were ſeized with, I cannot determine;

mine; but it is allowed, that the warm bath hath, in ſome caſes, done harm, and even occaſioned death. Partial fomentations have been much commended, and, I believe, upon good grounds: And I have no doubt but that fomentations of the feet and legs, as we now uſually apply them in fevers, might, without much ſtirring of the patient, be very aſſiduouſly employed with advantage.

MCCXIX.

Unctuous applications were very frequently employed in this diſeaſe by the antients; and ſome modern practitioners have conſidered them as very uſeful. Their effects, however, have not appeared to be conſiderable; and, as a weak auxiliary only, attended with ſome inconveniency, they have been very much neglected by the Britiſh practitioners.

MCCXX.

Bleeding, has been formerly employed in this diſeaſe; but, of late, it has been found prejudicial, excepting in a few caſes, where, in plethoric habits, a fever has ſupervened. In general, the ſtate of mens bodies, in warm climates, is unfavourable to blood-letting; and, if we may form indications from the ſtate of the blood drawn out of the veins, the ſtate of this, in tetanic diſeaſes, would forbid bleeding in them.

MCCXXI.

Bliſtering, alſo, has been formerly employed in this diſeaſe; but ſeveral practitioners aſſert that bliſters are conſtantly hurtful, and they are now generally omitted.

MCCXXII.

Theſe are the practices that hitherto have been generally employed; but, of late, we are informed by ſeveral Weſt India practitioners, that, in many inſtances, they have employed mercury with great advantage. We are told that it muſt be employed early in the diſeaſe; that it is moſt conveniently adminiſtered by unction, and ſhould be applied in that way in large quantities, ſo that the body may be ſoon filled with it, and a ſalivation raiſed, which is to be continued till the ſymptoms yield. Whether this method alone be generally ſufficient for the cure of the diſeaſe, or if it may be aſſiſted by the uſe of opium, and require this, in a certain meaſure, to be joined with it, I have not yet certainly learned.

MCCXXIII.

I have been further informed, that the *Tetanus*, in all its different degrees, has been cured by giving internally the *Piſſelaeum Barbadenſe*, or, as it is vulgarly called, the Barbadoes Tar. I think it proper to take notice of this here, although I am not exactly informed, what quantities of this medicine are to be given, or in what circumſtances of the diſeaſe it is moſt properly to be employed.

MCCXXIV.

Before concluding this chapter, it is proper for me to take ſome notice of that peculiar caſe of the *Tetanus*, or *Triſmus*, which attacks certain infants ſoon after their birth, and has been properly enough named the *Triſmus Naſcentium*. From the ſubjects it affects, it ſeems to be a peculiar diſeaſe; for theſe are infants not above two weeks, and commonly before they are nine days old; inſomuch that, in countries where the diſeaſe is frequent, if children paſs the period now mentioned, they are conſidered as ſecure againſt its attacks. The ſymptom of it chiefly taken notice of, is the *Triſmus*, or

Locked Jaw, which is by the vulgar improperly named the *Falling of the Jaw.* But this is not the only ſymptom, as, for the moſt part, it has all the ſame ſymptoms as the *Opiſthotonos* and *Tetanus*, ſtrictly ſo called, and which occur in the other varieties of Tetanic complaints above deſcribed. Like the other varieties of *Tetanus*, this is moſt frequent in warm climates, but is not, like thoſe ariſing from cold, nearly confined to ſuch warm climates; as inſtances of it have occurred in moſt of the northern countries of Europe. In theſe latter, it ſeems to be more frequent in certain diſtricts than in others, but in what manner limited, I cannot determine. It ſeems to be more frequent in Switzerland× than in France. I am informed of its frequently occurring in the Highlands of Scotland; but I have never met with any inſtance of it in the low country. The particular cauſes of it are not well known; and various conjectures have been offer-

ed;

× Tissot mentions it.

ed; but none of them are ſatisfying. It is a diſeaſe that has been almoſt conſtantly fatal, and this, alſo, commonly in the courſe of a few days. The women are ſo much perſuaded of its inevitable fatality, that they ſeldom or ever call for the aſſiſtance of our art. This has occaſioned our being little acquainted with the hiſtory of the diſeaſe, or with the effects of remedies in it. Analogy, however, would lead us to employ the ſame remedies that have proved uſeful in the other caſes of *Tetanus*; and the few experiments that are yet recorded ſeem to approve of ſuch a practice.

CHAP. II.

OF EPILEPSY.

MCCXXV.

In what ſenſe I uſe the term *Convulſion*, I have explained above in (MCXCIX.).

The convulſions that affect the human body are, in ſeveral reſpects, various; but I am to conſider here, only, the chief and moſt frequent form in which they appear, and which is in the diſeaſe named *Epilepſy*. This may be defined, as conſiſting in convulſions of the greater part of the muſcles of voluntary motion, attended with a loſs of ſenſe, and ending in a ſtate of inſenſibility, and ſeeming ſleep.

MCCXXVI.

The general form, or principal circumſtances of this diſeaſe, are much the ſame in all the different perſons whom it affects. It comes by fits, which attack perſons ſeemingly in perfect health, and, after laſting for ſome time, paſs off, and leave the perſons again in their uſual ſtate. Theſe fits are ſometimes preceded by certain ſymptoms, which, to perſons who have before experienced ſuch attacks, give notice of the approach of a fit, as we ſhall hereafter explain; but even theſe preludes do not commonly occur long before the formal attack, which, in moſt caſes, comes on ſuddenly, without any ſuch warning.

The perſon attacked loſes, ſuddenly, all ſenſe, and power of motion, ſo that, if ſtanding, he falls immediately, or, perhaps, with convulſions, is thrown to the ground. In that ſituation, he is agitated with violent convulſions, variouſly moving his limbs, and the trunk of his body. Sometimes the limbs on one ſide of the body are more violently, or more conſiderably agitated than thoſe upon the other. In all caſes, the muſcles of the face and eyes are much affected, exhibiting various and violent diſtortions of the countenance. The tongue is often affected, and thruſt out of the mouth, while the muſcles of the lower jaw, are alſo affected, and ſhutting the mouth with violence while the tongue is thruſt out between the teeth, it is often grievouſly wounded.

While theſe convulſions continue, there is commonly, at the ſame time, a frothy moiſture iſſuing from the mouth. Theſe convulſions have at times ſome remiſſions, but are ſuddenly again renewed with great violence. Generally, after no long ſpace, the convulſions ceaſe altogether, and the perſon, for ſome time, remains without motion, but in a ſtate of abſolute inſenſibility, and under the appearance of a profound ſleep.

After ſome continuance of this ſeeming ſleep, he gradually, though ſometimes ſuddenly, recovers his ſenſes, and power of motion, but without any memory of what had paſſed from his being firſt ſeized with the fit. During the convulſions, the pulſe and reſpiration are hurried and irregular; but, when the convulſions ceaſe, they return to their uſual regularity, and healthy ſtate.

This is the general form of the diſeaſe; and it varies only in different perſons, or, on different occaſions, in the ſame perſon, by the phaenomena mentioned being more or leſs violent, or by their being of longer or ſhorter duration.

MCCXXVII.

With reſpect to the proximate cauſe of this diſeaſe, I might ſay, that it is an affection of the energy of the brain, which ordinarily under the direction of the will, is here, without any concurrence of it, impelled by preternatural cauſes. But I could go no further: For, as to what is the mechanical condition of the brain, in the ordinary exertions of the will, I have no diſtinct knowledge, and, therefore, muſt be alſo ignorant of the preternatural ſtate of the ſame energy of the brain under the irregular motions here produced. To form, therefore, the indications of cure, from a knowledge of the proximate cauſe of this diſeaſe, I muſt not attempt; but, from a diligent attention to the remote cauſes which firſt induced, and occaſionally excite the diſeaſe, I think we may often obtain ſome uſeful directions for its cure. It ſhall therefore be my buſineſs now, to point out and enumerate theſe remote cauſes as well as I can.

MCCXXVIII.

The remote cauſes of epilepſy may be conſidered as occaſional or prediſponent.

There are, indeed, certain remote cauſes which act independently of any prediſpoſition; but, as we cannot always diſtinguiſh theſe from others, I ſhall conſider the whole under the uſual titles of *Occaſional* or *Prediſponent*.

MCCXXIX.

The occaſional cauſes may, I think, be properly referred to two general heads; the *firſt* being of thoſe which ſeem to act by directly ſtimulating, and exciting the energy of the brain; and, the *ſecond*, of thoſe which ſeem to act by weakening the ſame. With reſpect to both, for the brevity of expreſſing a fact, without meaning to explain the manner in which it is brought about, I ſhall uſe the terms of *Excitement* and *Collapſe*. And, though it be true, that, with reſpect to ſome of the cauſes I am to mention, it may be a little uncertain whether they act in the one way or the other, that does not render it improper for us to mark the mode of their operating, wherever we can do it clearly, as the doing ſo may often be of uſe in directing our practice.

MCCXXX.

Firſt, then, of the occaſional cauſes acting by excitement, they are either ſuch as act immediately and directly upon the brain itſelf, or thoſe which are firſt applied to the other parts of the body, and are from thence communicated to the brain.

MCCXXXI.

The cauſes of excitement immediately and directly applied to the brain, may be referred to the four heads of, 1. Mechanical Stimulants; 2. Chemical Stimulants; 3.

3. Mental Stimulants; and, 4. the Peculiar Stimulus of Over Diſtenſion.

MCCXXXII.

The Mechanical Stimulants may be wounding inſtruments penetrating the cranium, and entering the ſubſtance of the brain; or ſplinters of a fractured cranium, operating in the ſame manner; or ſharp pointed oſſifications, either ariſing from the internal ſurface of the cranium, or formed in the membranes of the brain.

MCCXXXIII.

The Chemical Stimulants (MCCXXXI.) may be certain ſerous fluids from effuſion; or purulent, in conſequence of inflammation, lodged in certain parts of the brain, and become acrid by ſtagnation, or otherwiſe.

MCCXXXIV.

The Mental Irritations, acting by excitement, are, all violent emotions of the active kind, ſuch as joy and anger. The *firſt* of theſe is manifeſtly an exciting power, acting ſtrongly, and immediately, on the energy of the brain. The *ſecond* is manifeſtly, alſo, a power acting in the ſame manner; but it muſt be remarked, that it is not in this manner alone anger produces its effects; for it acts, alſo, ſtrongly on the ſanguiferous ſyſtem, and may be a means of giving the ſtimulus of over diſtenſion, as, under a fit of anger, the blood is impelled into the veſſels of the head with violence, and in a larger quantity.

MCCXXXV.

Under the head of Mental Irritations, is to be mentioned, the ſight of perſons in a fit of epilepſy, which has often produced a a fit of the like kind in the ſpectator. It may, indeed, be a queſtion, Whether this effect be imputable to the horror produced by a ſight of the ſeemingly painful agitations of the limbs, and of the diſtortions in the countenance of the epileptic perſon; or if it may be aſcribed to the force of imitation merely? It is poſſible that horror may ſometimes produce the effect; but, certainly, much may be imputed to that propenſity to imitation, at all times ſo powerful and prevalent in human nature; and ſo often operating in other caſes of convulſive diſorders, which do not preſent any ſpectacle of horror.

MCCXXXVI.

Under the ſame head of Mental Irritation, I think proper to mention as an inſtance of it, the *Epilepſia Simulata*, or the *Feigned Epilepſy*, ſo often taken notice of. Although this, at firſt, may be entirely feigned, I have no doubt but that the repetition renders it at length real. The hiſtory of Quietiſm and of Exorciſms leads me to this opinion; and which receives a confirmation from what we know of the power of imagination, in renewing epileptic and hyſteric fits.

MCCXXXVII.

I come now to the *fourth* head of the irritations applied immediately to the brain, and which I apprehend to be that of the over diſtenſion of the blood-veſſels in that organ. That ſuch a cauſe operates in producing epilepſy, is probable from this, that the diſſection of perſons dead of epilepſy, has commonly diſcovered the marks of a previous congeſtion in the blood-veſſels of the brain. This, perhaps, may be ſuppoſed the effect of the laſt fatal fit; but that the congeſtion was previous thereto, is probable from the epilepſy being ſo often joined with headach, mania, palſy, and apoplexy, all of them diſeaſes depending upon a congeſtion in the veſſels of the brain. The general opinion receives alſo confirmation from this circumſtance, that, in the brain of perſons dead of epilepſy, there have been often found tumours and effuſions which, though ſeemingly not ſufficient to produce thoſe diſeaſes which depend on the compreſſion of a conſiderable portion of the brain, may, however, have been ſufficient to compreſs ſo many veſſels as to render the others upon any occaſion, of a more than uſual turgeſcence, or impulſe of the blood into the veſſels of the brain, more liable to an over diſtenſion.

MCCXXXVIII.

Theſe conſiderations alone might afford foundation for a probable conjecture with reſpect to the effects of over diſtenſion; but the opinion does not reſt upon conjecture alone.

That it is alſo founded in fact, appears from hence, that a plethoric ſtate is favourable to epilepſy, and that every occaſional turgeſcence, or unuſual impulſe of the blood into the veſſels of the brain, ſuch as a fit of anger, the heat of the ſun, or of a warm chamber, violent exerciſe, a ſurfeit, or a fit of intoxication, are frequently the immediately exciting cauſes of epileptic fits.

MCCXXXIX.

I venture to remark, further, that a piece of theory may be admitted as a confirmation of this doctrine. As I have formerly maintained, that a certain fulneſs and tenſion of the veſſels of the brain, is neceſſary to the ſupport of its ordinary and conſtant energy, in the diſtribution of the nervous power, ſo it muſt be ſufficiently probable, that an over diſtenſion of theſe blood-veſſels may be a cauſe of violent excitement.

MCCXL.

We have now enumerated the ſeveral remote, or occaſional cauſes of epilepſy, acting by excitement, and acting immediately upon the brain itſelf. Of the cauſes acting by excitement, but acting upon other parts of the body, and from thence communicated to the brain, they are all of them impreſſions producing an exquiſite, or high degree, either of pleaſure or pain.

Impreſſions which produce neither the one nor the other, have hardly any ſuch effects, unleſs when ſuch impreſſions are in a violent degree, and then their operation may be conſidered as a mode of pain. It is, however, to be remarked, that all ſtrong impreſſions, which are ſudden and ſurpriſing, or, in other words, unforeſeen and unexpected, have frequently the effect of bringing on epileptic fits.

MCCXLI.

There are certain impreſſions made upon different parts of the body, which, as they often operate without producing any ſenſation, ſo it is uncertain to what head they belong ; but it is probable that the greater part of them act by excitement, and therefore fall to be mentioned here. The chief inſtances are, the teething of infants, worms, acidity, or other acrimony, in the alimentary canal, calculi in the kidneys, acrid matter in abſceſſes or ulcers, or acrimony diffuſed in the maſs of blood, as in the caſe of ſome contagions.

MCCXLII.

Phyſicians have found no difficulty in comprehending how direct ſtimulants, of a certain force, may excite the action of the brain, and occaſion epilepſy ; but they have hitherto taken little notice of certain cauſes, which manifeſtly weaken the energy of the brain, and act, as we ſpeak, by collapſe. Theſe, however, have the effect of exciting the action of the brain in ſuch a manner as to occaſion epilepſy. We might, upon this ſubject, ſpeak of the *vis medicatrix naturae;* and there is a foundation for the term; but, as we do not admit the Stahlian doctrine of an adminiſtering ſoul, I acknowledge the term only as expreſſing a fact, and would not employ it with the view of conveying any explanation of the manner in which the powers of collapſe mechanically produce their effects. In the mean time, however, I maintain that there are certain powers of collapſe, which, in effect, prove ſtimulants, and produce epilepſy.

MCCXLIII.

That there are ſuch powers, which may be termed indirect ſtimulants, I conclude from hence, that ſeveral of the cauſes of epilepſy are ſuch as frequently produce ſyncope, which we ſuppoſe always to depend upon cauſes weakening the energy of the brain (MCXIX.) 21. It may give ſome difficulty to explain why the ſame cauſes ſometimes occaſion ſyncope, and ſometimes occaſion the reaction that appears in epilepſy; and I ſhall not attempt to explain it; but this, I think, does not prevent our ſuppoſing that the operation of theſe cauſes is by collapſe. That there are ſuch cauſes producing epilepſy, will, I think, appear very clearly from the particular examples of them I am now to mention.

MCCXLIV.

The firſt to be mentioned, which I ſuppoſe to be of this kind, is haemorrhagy, whether ſpontaneous or artificial. That the ſame haemorrhagy which produces ſyncope, often, at the ſame time, produces epilepſy, is well known; and, from many experiments and obſervations, it appears, that haemorrhagies, occurring to ſuch a degree as to prove mortal, ſeldom go this length, without producing epilepſy.

MCCXLV.

Another cauſe acting, as I ſuppoſe, by collapſe, and therefore ſometimes producing ſyncope, and ſometimes epilepſy, is terror, that is, the fear of ſome great evil ſuddenly preſented. As this produces, at the ſame time, a ſudden and conſiderable emotion, (MCCXL.), ſo it more frequently produces epilepſy than ſyncope.

MCCXLVI.

A third cauſe acting by collapſe, and producing epilepſy, is horror, or a ſtrong averſion ſuddenly raiſed by a very diſagreeable ſenſation, and frequently ariſing from a ſympathy with the pain or danger of another perſon. As horror is often a cauſe of ſyncope, there can be no doubt of its manner of operating in producing epilepſy; and it may perhaps be explained upon this general principle, that, as deſire excites action, and gives activity, ſo averſion reſtrains from action, that is, weakens the energy of the brain; and, therefore, the higher degrees of averſion may have the effects I have mentioned.

MCCXLVII.

A fourth ſet of the cauſes of epilepſy, which I ſuppoſe alſo to act by collapſe, are certain odours, which occaſion either ſyncope or epilepſy; and, with reſpect to the former, I have given my reaſons (MCCXLVII.) 1126. for ſuppoſing odours, in that caſe, to act rather as diſagreeable than as ſedative. Theſe reaſons will, I think, alſo apply here; and perhaps the whole affair of odours might be conſidered as inſtances of the effect of horror, and therefore belonging to the laſt head.

MCCXLVIII.

A fifth head of the cauſes producing epilepſy, is the operation of many ſubſtances conſidered, and, for the moſt part, properly conſidered, as poiſons. Many of theſe, before they prove mortal, occaſion epilepſy. This effect, indeed, may, in ſome caſes, be referred to the inflammatory operation which they ſometimes diſcover in the ſtomach, and other parts of the alimentary canal; but, as the greater part of the vegetable poiſons ſhow chiefly a narcotic, or ſtrongly ſedative power, it is probably by this power that they produce epilepſy, and therefore belong to this head of the cauſes acting by collapſe.

MCCXLIX.

Under the head of the remote cauſes producing epilepſy, we muſt now mention that peculiar one, whoſe operation is accompanied with what is called the *Aura Epileptica*. This is a ſenſation of ſomething moving in ſome part of the limbs, or trunk of the body, and from thence creeping upwards to the head; and, when it arrives there, the perſon is immediately deprived of ſenſe, and falls into an epileptic fit. This motion is deſcribed by the perſons feeling it ſometimes as a cold vapour, ſometimes as a fluid gliding, and ſometimes as the ſenſe of a ſmall inſect creeping along their body; and very often they can give no diſtinct idea of their ſenſation, otherwiſe than as, in general, of ſomething moving along. This ſenſation might be ſuppoſed to ariſe from ſome affection of the extremity, or other part of a nerve acted upon by ſome irritating matter, and that the ſenſation, therefore, followed the courſe of ſuch a nerve; but I have never found it following diſtinctly the courſe of any nerve; and it generally ſeems to paſs along the teguments. It has been found, in ſome inſtances, to ariſe from ſomething preſſing upon, or irritating a particular nerve, and that ſometimes in conſequence of contuſion or wound; but inſtances of theſe are more rare; and the more common conſequence of contuſions and wounds is a tetanus. This latter effect wounds produce, without giving any ſenſation of an aura, or other kind of motion proceeding from the part to the head; while, on the other hand, the aura producing epilepſy often ariſes from a part which had never before been affected with wound or contuſion, and in which part the nature of the irritation can ſeldom be diſcovered.

It is natural to imagine that this *aura epileptica* is an evidence of ſome irritation, or direct ſtimulus, acting in the part, and from thence communicated to the brain, and ſhould, therefore, have been mentioned among the cauſes acting by excitement; but the remarkable difference that occurs in ſeemingly like cauſes producing tetanus, gives ſome doubt on this ſubject.

MCCL.

Having now enumerated the occaſional cauſes, we proceed to conſider the prediſponent. As ſo many of the above mentioned cauſes act upon certain perſons, and not at all upon others, there muſt be ſuppoſed in thoſe perſons a prediſpoſition to this diſeaſe: But in what this prediſpoſition conſiſts is not to be eaſily aſcertained.

MCCLI.

As many of the occaſional cauſes are weak impreſſions, and are applied to moſt perſons with little or no effect, we conclude that the perſons affected by thoſe cauſes are more eaſily moved than others, and, therefore, that, in this caſe, a certain mobility gives the prediſpoſition. It will, perhaps, make this matter clearer, to ſhow, in the firſt place, that there is a mobility of conſtitution in ſome perſons more than in others.

MCCLII.

This mobility appears moſt clearly in the ſtate of the mind. If a perſon is readily elated by hope, and as readily depreſſed by fear, and paſſes eaſily and quickly from the one ſtate to the other; if he is eaſily pleaſed, and prone to gaiety, and as eaſily provoked to anger, and rendered peeviſh; if liable, from ſlight impreſſions, to ſtrong emotions, but tenacious of none, this is the boyiſh temperament, *qui colligit ac ponit iram temere et mutatur in horas*; this is the *varium et mutabile foemina;* and, both in the boy and woman, every one perceives and acknowledges a mobility of mind. But this is neceſſarily connected with an analogous ſtate of the brain, that is, with a mobility, in reſpect of every impreſſion, and, therefore, liable to a ready alternation of excitement and collapſe, and of both to a conſiderable degree.

MCCLIII.

There is, therefore, in certain perſons, a mobility of conſtitution, generally derived from the ſtate of original ſtamina, and more exquiſite at a certain period of life than at others, but ſometimes ariſing from, and particularly modified by occurrences in the courſe of life.

MCCLIV.

This mobility conſiſts in a greater degree either of ſenſibility or irritability. Theſe conditions, indeed, phyſicians conſider as ſo neceſſarily connected, that the conſtitution, with reſpect to them, may be conſidered as one and the ſame; but I am of opinion that they are different, and that mobility may ſometimes depend upon an increaſe of the one, and ſometimes on that of the other. If an action excited, is, by repetition, rendered more eaſily excited, and more vigorouſly performed, I conſider this as an increaſe of irritability only. I go no farther on this ſubject here, as it was only neceſſary to take notice of the caſe juſt now mentioned, for the purpoſe of explaining why epilepſy, and convulſions of all kinds, by being repeated, are more eaſily excited, readily become habitual, and are therefore of more difficult cure.

MCCLV.

However we may apply the diſtinction of ſenſibility and irritability, it appears that the mobility, which is the prediſponent cauſe of epilepſy, depends more particularly upon debility, or upon a plethoric ſtate of the body.

MCCLVI.

What ſhare debility, perhaps, by inducing ſenſibility,× has in this matter appears clearly from hence, that children, women, and other perſons of manifeſt debility, are ~~the~~ ~~moſt~~ frequent ſubjects of this diſeaſe.

MCCLVII.

The effects of a plethoric ſtate in diſpoſing to this diſeaſe appear~~s~~ from hence, that plethoric perſons are frequently the ſubjects

× I am not certain of this: it often produces a greater degree of irritability.

ſubjects of it; that it is commonly excited, as we have ſaid above, by the cauſes of any unuſual turgeſcence of the blood; and that it has been frequently cured by diminiſhing the plethoric ſtate of the body.

That a plethoric ſtate of the body ſhould diſpoſe to this diſeaſe, we may underſtand from ſeveral conſiderations. 1*ſt*, Becauſe a plethoric ſtate implies, for the moſt part, a laxity of the ſolids, and, therefore, ſome debility in the moving fibres. 2*dly*, Becauſe, in a plethoric ſtate, the tone of the moving fibres depends more upon their tenſion than upon their inherent power; and as their tenſion depends upon the quantity and impetus of the fluids in the blood-veſſels, which are very changeable, and, by many cauſes, frequently changed, ſo theſe frequent changes muſt give a mobility to the ſyſtem. 3*dly*, Becauſe a plethoric ſtate is favourable to a congeſtion of blood in the veſſels of the brain, it muſt render theſe more readily affected by every general turgeſcence of the blood in the ſyſtem, and, therefore, more eſpecially diſpoſe to this diſeaſe.

MCCLVIII.

There is another circumſtance of the body diſpoſing to epilepſy, which we cannot ſo well account for, and that is the ſtate of ſleep; but whether we can account for it or not, it appears, in fact, that this ſtate gives the diſpoſition we ſpeak of; for, in many perſons liable to this diſeaſe, the fits happen only in the time of ſleep, or immediately upon their coming out of it. In a caſe related by De Haen, it appeared clearly that the diſpoſition to epilepſy depended entirely upon the ſtate of the body in ſleep.

MCCLIX.

MCCLIX.

Having thus conſidered the whole of the remote cauſes of epilepſy, I proceed to treat of its cure, as I have ſaid it is from the conſideration of thoſe remote cauſes only, that we can obtain any directions for our practice in this diſeaſe.

I begin with obſerving, that, as the diſeaſe may be conſidered as ſympathic× or idiopathic, I muſt treat of theſe ſeparately, and judge it proper to begin with the former.

MCCLX.

When this diſeaſe is truly ſympathic, and depending upon a primary affection in ſome other part of the body, ſuch as acidity, or worms in the alimentary canal, teething, or other ſimilar cauſes, it is obvious that ſuch primary affections muſt be removed for

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× meaning such as depend on affections in some other part of the body, instead of the brain, & from thence conveyed to the Brain.

the cure of the epilepſy; but it is not our buſineſs here to ſay how theſe primary diſeaſes are to be treated.

MCCLXI.

There is, however, a peculiar caſe of ſympathic epilepſy, that is, the caſe accompanied with the *aura epileptica*, as deſcribed in (MCCLIII.), in which, though we can perceive by 49. the *aura epileptica* ariſing from a particular part, that there is ſome affection in that part, yet, in many ſuch caſes, as we cannot perceive of what nature the affection is, with reſpect to them, we can only offer the following general directions.

1ſt, When the part can with ſafety be entirely deſtroyed, we ſhould endeavour to do ſo by cutting it out, or by deſtroying it by the application of an actual or potential cautery.

2dly, When the part cannot be properly deſtroyed, that we ſhould endeavour to correct the morbid affection in it by bliſtering, or by eſtabliſhing an iſſue upon the part.

3*dly*, When theſe meaſures cannot be executed, or do not ſucceed, if the diſeaſe ſeems to proceed from the extremity of a particular nerve which we can eaſily come at in its courſe, it will be proper to cut through that nerve, as before propoſed on the ſubject of tetanus.

4*thly*, When it cannot be perceived that the *aura* ariſes from any preciſe place, or point, ſo as to direct to the above mentioned operations, but, at the ſame time, we can perceive its progreſs along the limb, it frequently happens that the epilepſy can be prevented by a ligature applied upon the limb, above the part from which the *aura* ariſes; and this is always proper to be done, both becauſe the preventing a fit breaks the habit of the diſeaſe, and becauſe the frequent compreſſion renders the nerves leſs fit to propagate the *aura*.

MCCLXII.

MCCLXII.

The cure of idiopathic epilepſy, as I have ſaid above, is to be directed by our knowledge of the remote cauſes: There are, therefore, two general indications to be formed. The *firſt* is to avoid the occaſional cauſes; and the *ſecond* is to remove or correct the prediſponent.

This method, however, is not always purely palliative; as, in many caſes, the prediſponent may be conſidered as the only proximate cauſe, ſo our *ſecond* indication may be often conſidered as properly curative.

MCCLXIII.

From the enumeration given above, it will be manifeſt, that, for the moſt part, the occaſional cauſes, ſo far as they are in our power, need only to be known, in order to be avoided, and the means of doing this will be ſufficiently obvious. I ſhall therefore here offer only a few remarks.

MCCLXIV.

One of the moſt frequent of the occaſional cauſes is that of over diſtenſion (MCCXXXVII.), which, ſo far as it depends upon a plethoric ſtate of the ſyſtem, I ſhall ſay hereafter how it is to be avoided. But as not only in the plethoric, but in every moveable conſtitution, occaſional turgeſcence is a frequent means of exciting epilepſy, the avoiding, therefore, of ſuch turgeſcence is what ought to be moſt conſtantly the object of attention to perſons liable to epilepſy. ×

MCCLXV.

Another of the moſt frequently exciting cauſes of this diſeaſe are, all ſtrong impreſſions

× See Paragraph 1238.

ſions ſuddenly made upon the ſenſes, for as ſuch impreſſions, in moveable conſtitutions, break in upon the uſual force, velocity, and order of the motions of the nervous ſyſtem, they thereby readily produce epilepſy. Such impreſſions, therefore, and eſpecially thoſe which are ſuited to excite any emotion or paſſion of the mind, are to be moſt carefully guarded againſt by perſons liable to epilepſy.

MCCLXVI.

In many caſes of epilepſy, where the predisponent cauſe cannot be corrected or removed, the recurrences of the diſeaſe can only be prevented by the ſtricteſt attention to avoid the occaſional; and, as the diſeaſe is often confirmed by repetition and habit, ſo the avoiding the frequent recurrence of it is of the utmoſt importance towards its cure.

Theſe are the few remarks we have to offer with reſpect to the occaſional cauſes, and muſt now obſerve, that, for the moſt part, the complete, or, as it is called, the radical cure, is only to be obtained by removing or correcting the prediſponent cauſe.

MCCLXVII.

We have ſaid above, that the prediſponent cauſe of epilepſy is a certain mobility of the ſenſorium, and that this depends upon a plethoric ſtate of the ſyſtem, or upon a certain ſtate of debility in it.

MCCLXVIII.

How the plethoric ſtate of the ſyſtem is to be corrected, I have treated of fully above in (DCCXLVI. et ſeq.), and I need not repeat it here. It will be enough to ſay, that it is chiefly to be done by a proper management of exerciſe and diet; and, with reſpect to the latter, it is particularly to be obſerved here, that an abſtemious courſe has been frequently found to be the moſt certain means of curing epilepſy.

MCCLXIX.

Conſidering the nature of the matter poured out by iſſues, theſe may be ſuppoſed to be a conſtant means of obviating the plethoric ſtate of the ſyſtem, and it is, perhaps, therefore, that they have been ſo often found uſeful in epilepſy. Poſſibly, alſo, as an open iſſue may be a means of determining occaſional turgeſcences to ſuch places, and, therefore, of diverting them in ſome meaſure from their action upon the brain, ſo alſo, in this manner, iſſues may be uſeful in epilepſy.

MCCLXX.

It might be ſuppoſed that blood-letting would be the moſt effectual means of correcting the plethoric ſtate of the ſyſtem; and ſuch it certainly proves when the plethoric ſtate has become conſiderable, and immediately threatens morbid effects. It is, therefore, in ſuch circumſtances, proper and neceſſary; but, as we have ſaid above, that blood-letting is not the proper means of obviating a recurrence of the plethoric ſtate, and, upon the contrary, is often the means of favouring it, ſo it is not a remedy adviſeable in every circumſtance of epilepſy. There is, however, a caſe of epilepſy, in which there is a periodical or occaſional recurrence of the fulneſs and turgeſcence of the ſanguiferous ſyſtem, giving occaſion to a recurrence of the diſeaſe. In ſuch caſes, when the means of preventing plethora have been neglected, or may have proved ineffectual, it is abſolutely neceſſary for the practitioner to watch the returns of theſe turgeſcences, and to obviate their effects by the only certain means of doing it, that is, by a large blood-letting.

MCCLXXI.

The ſecond cauſe of mobility which we have aſſigned, is a ſtate of debility. If this is owing, as it frequently is, to original conformation, it is perhaps not poſſible to cure it; but when it has been brought on in the courſe of life, it poſſibly may admit of being mended; and, in either caſe, much may be done to obviate and prevent its effects.

MCCLXXII.

The means of correcting debility, ſo far as it can be done, are the perſon's being much in cool air, the frequent uſe of cold bathing, the uſe of exerciſe adapted to the ſtrength and habits of the perſon, and, perhaps, the uſe of aſtringent and tonic medicines.

Theſe remedies are ſuited to ſtrengthen the inherent power of the ſolids, or moving fibres; but, as the ſtrength of theſe depends alſo upon their tenſion, ſo, when debility has proceeded from inanition, the ſtrength may be reſtored, by reſtoring the fulneſs and tenſion of the veſſels by a nouriſhing diet; and we have had inſtances of the propriety and ſucceſs of ſuch a practice.×

MCCLXXIII.

The means of obviating the effects of debility, and of the mobility depending upon it, are the uſe of tonic and antiſpaſmodic remedies.

The tonics are fear, or ſome degree of terror, aſtringents, certain vegetable and metallic tonics, and cold bathing.

MCCLXXIV.

× a Student, treated by us for some years upo
the starving plan both by Diet & Medicines wi-
-out any Effect, on quitting College took to a very
nourishing Diet &c; living gayly; & thereby wa
perfectly cured.

MCCLXXIV.

That fear, or ſome degree of terror, may be of uſe in preventing epilepſy, we have a remarkable proof in Boerhaave's cure of the epilepſy, which happened in the Orphan-houſe at Harlem. See Kauu Boerhaave's treatiſe, entitled *Impctum Faciens*, § 406. And we have met with ſeveral other inſtances of the ſame.

As the operation of horror is in many reſpects analogous to that of terror, ſeveral ſeemingly ſuperſtitious remedies have been employed for the cure of epilepſy; and, if they have ever been ſucceſsful, I think it muſt be imputed to the horror they had inſpired.

MCCLXXV.

Of the aſtringent medicines uſed for the cure of epilepſy, the moſt celebrated is the *viſcus quercinus*,× which, when given in large quantities, may poſſibly be uſeful; but I believe it was more eſpecially ſo in antient times, when it was an object of ſuperſtition. In the few inſtances in which I have ſeen it employed, it did not prove of any effect.

MCCLXXVI.

Among the vegetable tonics, the bitters are to be reckoned; and it is by this quality that I ſuppoſe the orange tree leaves to have been uſeful; but they are not always ſo.

MCCLXXVII.

The vegetable tonic, which, from its uſe in analogous caſes, is the moſt promiſing, is the Peruvian bark; this, upon occaſion, has been uſeful, but has alſo often failed. It is eſpecially adapted to thoſe epilepſies which recur at certain periods, and which are,

× Misletoe.

are, at the ſame time, without the recurrence of any plethoric ſtate, or turgeſcence of the blood, and, in ſuch periodical caſe, if the bark is employed, ſome time before the expected recurrence, it may be uſeful; but it muſt be given in large quantity, and as near to the time of the expected return as poſſible.

MCCLXXVIII.

The metallic tonics ſeem to be more powerful than the vegetable, and a great variety of the former have been employed.

Even arſenic has been employed in the cure of epilepſy; and its uſe in intermittent fevers gives an analogy in its favour.

Preparations of tin have been formerly recommended in the cure of epilepſy, and in the cure of the analogous diſeaſe of hyſteria; and ſeveral conſiderations render the virtues of tin, with reſpect to theſe diſeaſes, probable; but I have had no experience of its uſe in ſuch caſes.

A much ſafer metallic tonic is to be found in the preparations of iron; and we have ſeen ſome of them employed in the cure of epilepſy, but have never found them to be effectual. This, however, I think may be imputed to their not having been always employed in the circumſtances of the diſeaſe, and in the quantities of the medicine, that were proper and neceſſary.

MCCLXXIX.

Of the metallic tonics, the moſt celebrated, and the moſt frequently employed, is copper,× under various preparations. What preparation of it may be the moſt effectual we dare not determine; but, of late, the *cuprum ammoniacum** has been frequently found ſucceſsful.

MCCLXXX.

× I have also employed the common blue
Vitriol with advantage.
* The largest Dose I have ever given of the Cupr
was to gr. V twice a day; after giving smal
ler Doses & encreasing them gradually.

MCCLXXX.

Lately, the flowers of zinc have been recommended, by a great authority,[x] as uſeful in all convulſive diſorders; but, in caſes of epilepſy, we have not hitherto found it uſeful.

MCCLXXXI.

There have been of late ſome inſtances of the cure of epilepſy by the accidental uſe of mercury; and if the late accounts of the cure of tetanus by this remedy are confirmed, it will allow us to think that the ſame may be adapted alſo to the cure of certain caſes of epilepſy.

MCCLXXXII.

With reſpect to the employment of any of the above mentioned tonics in this diſ-

eaſe,

[x] Gaubius. I think White Vitriol a more powerful tonic than Zinc.

eaſe, it muſt be obſerved, that, in all caſes where the diſeaſe depends upon a conſtant, or occaſional plethoric ſtate of the ſyſtem, theſe remedies are likely to be ineffectual; and if ſufficient evacuations are not made at the ſame time, theſe medicines are likely to be very hurtful.

MCCLXXXIII.

The other ſet of medicines which we have mentioned as ſuited to obviate the effects of the too great mobility of the ſyſtem, are the medicines named antiſpaſmodics. Of theſe there is a long liſt in the writers on the *Materia Medica*, and by theſe authors recommended for the cure of epilepſy. The greater part, however, of theſe taken from the vegetable kingdom, are manifeſtly inert and inſignificant. Even the root of the wild valerian× hardly ſupports its credit.

MCCLXXXIV.

× I have seen it given to ʒſs a day without any benefit.

MCCLXXXIV.

Certain ſubſtances taken from the animal kingdom ſeem to be much more powerful; and of theſe the chief, and ſeemingly the moſt powerful, is muſk,[x] which employed in its genuine ſtate, and in due quantity, has often been an effectual remedy.

It is probable, alſo, that the *oleum animale*, as it has been called, when in its pureſt ſtate, and exhibited at a proper time, may be an effectual remedy.

MCCLXXXV.

In many diſeaſes, the moſt powerful antiſpaſmodic is certainly opium; but the propriety of its uſe in epilepſy has been diſputed[*] among phyſicians. When the diſeaſe depends upon a plethoric ſtate, in which bleeding may be neceſſary, the employment of opium is likely to be very

hurtful;

[x] The smallest dose of this is gr. x. and it may be given to ʒß for a Dose.

[*] I have, however, often imployed it with very considerable advantage.

hurtful; but, when there is no plethoric or inflammatory ſtate preſent, and the diſeaſe ſeems to depend upon irritation, or upon increaſed irritability, opium is likely to prove the moſt certain remedy. Whatever effects in this, and other convulſive diſorders, have been attributed to the hyoſcyamus,x muſt probably be attributed to its poſſeſſing a narcotic power ſimilar to that of opium.

MCCLXXXVI.

With reſpect to the uſe of antiſpaſmodics, it is to be obſerved, that they are always moſt uſeful, and, perhaps, only uſeful, when employed ~~in the time~~ during the frequency of epileptic fits, or near to the times of their acceſſion.

MCCLXXXVII.

On the ſubject of the cure of epilepſy, we have only to add, that, as the diſeaſe, in

x Recommended much by Baron Stork.

in many caſes, is continued by the power of habit only, and that, in all caſes, habit has a great ſhare in increaſing mobility, and, therefore, in continuing this diſeaſe; ſo the breaking in upon ſuch habit, and changing the whole habits of the ſyſtem, is likely to be a powerful remedy in epilepſy. Accordingly, a conſiderable change of climate, diet, and other circumſtances in the manner of life, has often proved a cure to this diſeaſe.

MCCLXXXVIII.

After treating of epilepſy, we might here treat of particular convulſions, which are to be diſtinguiſhed from epilepſy by their being more partial, that is, affecting certain parts of the body only, and are not attended with a loſs of ſenſe, nor end in ſuch a comatoſe ſtate as epilepſy always does.

MCCLXXXIX.

Of ſuch convulſive affections, many different inſtances have been obſerved and recorded by phyſicians, but many of theſe have been manifeſtly ſympathic affections, to be cured only by curing the primary diſeaſe, and, therefore, not to be treated of here: Or, if they could not always be referred to another diſeaſe, as many of them, however, have not any ſpecific character with which they occur in different perſons, I muſt, therefore, leave them to be treated upon the general principles I have laid down with reſpect to epilepſy, or ſhall lay down with reſpect to the following convulſive diſorder, which, as having very conſtantly, in different perſons, a peculiar character, I think neceſſary to treat of more particularly.

CHAP. III.

OF THE CHOREA,

OR

DANCE OF ST VITUS.

MCCXC.

This diſeaſe affects both ſexes, and almoſt only young perſons. It generally happens from the age of ten, to that of fourteen years. It comes on always before the age of puberty, and rarely continues beyond that period.

MCCXCI.

MCCXCI.

It is chiefly marked by convulſive motions, ſomewhat varied in different perſons, but nearly of one kind in all, affecting the leg and arm on the ſame ſide, and generally on one ſide only.

MCCXCII.

Theſe convulſive motions commonly firſt affect the leg and foot. Though the limb be at reſt, the foot is often agitated by convulſive motions, turning it alternately outwards and inwards. When walking is attempted, the affected leg is ſeldom lifted as uſual in walking, but is dragged along, as if the whole limb were paralytic; and, when it is attempted to be lifted, this motion is unſteadily performed, the limb becoming agitated by irregular convulſive motions.

MCCXCIII.

The arm of the ſame ſide is generally affected at the ſame time; and, even when no voluntary motion is attempted, the arm is frequently agitated with various convulſive motions. But eſpecially when voluntary motions are attempted, theſe are not properly executed, but are variouſly hurried or interrupted by convulſive motions, in a direction contrary to that intended. The moſt common inſtance of this is in the perſon's attempting to carry a cup of liquor to his mouth, when it is only after repeated efforts, interrupted by frequent convulſive retractions and deviations, that the cup can be carried to the mouth.

MCCXCIV.

It appears to me that the will often yields to theſe convulſive motions, as to a propenſity, and thereby they are often increaſed, while the perſon affected ſeems pleaſed with increaſing the ſurpriſe and amuſement which his motions occaſion in the byſtanders.

MCCXCV.

In this diſeaſe the mind is often affected with ſome degree of fatuity, and often ſhows the ſame varied, deſultory, and cauſeleſs emotions, which occur in hyſteria.

MCCXCVI.

Theſe are the moſt common circumſtances of this diſeaſe; but at times, and in different perſons, it is varied by ſome difference in the convulſive motions, particularly by theſe affecting the head and trunk of the body. As, in this diſeaſe, there ſeem to be propenſities to motion, ſo various fits of leaping and running occur in the perſons affected; and there have been inſtances of this diſeaſe, conſiſting of ſuch convulſive motions, appearing as an epidemic in a certain corner of the country. In ſuch inſtances, perſons of different ages are affected, and may ſeem to make an exception to the general rule above laid down; but ſtill the perſons affected are, for the moſt part, the young of both ſexes, and of the more manifeſtly moveable conſtitutions.

MCCXCVII.

The method of curing this diſeaſe has been variouſly propoſed. Dr Sydenham propoſed to cure it by alternate bleeding and purging. In ſome plethoric habits I have found ſome bleeding uſeful; but, in many caſes, I have found repeated evacuations, eſpecially by bleeding, very hurtful.

In many caſes I have found the diſeaſe, in ſpite of remedies of all kinds, continue for many months, but I have alſo found it often readily yield to tonic remedies, ſuch as the Peruvian bark and chalybeates.

The late Dr De Haen found ſeveral perſons labouring under this diſeaſe cured by the application of electricity.

SECT. II.

OF THE SPASMODIC AFFECTIONS OF THE VITAL FUNCTIONS.

CHAP. IV *.

OF THE PALPITATION OF THE HEART.

MCCXCVIII.

The motion thus named is a contraction, or ſyſtole of the heart, that is performed with more rapidity, and generally, alſo, with more force, than uſual, and when, at the

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* Though I have thought it proper to divide this book into sections, I think it neceſſary, for the conveniency of references, to number the chapters from the beginning.

the ſame time, the heart ſtrikes with more than uſual violence againſt the inſide of the ribs, producing often a conſiderable ſound.

MCCXCXIX.

This motion, or palpitation, is occaſioned by a great variety of cauſes, which have been recited with great pains by Mr Senac, and others, whom, however, I cannot follow in all the particulars with ſufficient diſcernment, and, therefore, ſhall here only attempt to refer all the ſeveral caſes of this diſeaſe to a few general heads.

MCCC.

The firſt is of theſe ariſing from the application of the uſual ſtimulus to the heart's contraction; that is, the influx of the venous blood, into its cavities, being made with more velocity, and, therefore, in the ſame time, in greater quantity than uſual. It ſeems to be in this manner that violent exerciſe occaſions palpitation.

MCCCI.

A ſecond head of the caſes of palpitation is of theſe ariſing from any reſiſtance given to the free and entire evacuation of the ventricles of the heart. Thus a ligature made upon the aorta occaſions palpitations of the moſt violent kind. Similar reſiſtances, either in the aorta, or pulmonary artery, may be readily imagined; and ſuch have been often found in the dead bodies of perſons, who, during life, had been much affected with palpitations.

To this head are to be referred all thoſe caſes of palpitation ariſing from cauſes producing an accumulation of blood in the great veſſels near to the heart.

MCCCII.

A third head of the caſes of palpitation, is of theſe ariſing from a more violent and rapid influx of the nervous power into the muſcular fibres of the heart. It is in this manner that I ſuppoſe various cauſes acting in the brain, and, particularly, certain emotions of the mind, to occaſion palpitation.

MCCCIII.

A fourth head of the caſes of palpitation, is of theſe ariſing from cauſes producing a weakneſs in the action of the heart, by diminiſhing the energy of the brain with reſpect to it. That ſuch cauſes operate in producing palpitation, I preſume from hence, that all the ſeveral cauſes mentioned above (MCXXI.-MCXXVIII.), as in this manner producing ſyncope, do often produce palpitation. It is on this ground that theſe two diſeaſes are affections frequently occurring in the ſame perſon, as the ſame cauſes may occaſion the one or the other, according to the force of the cauſe, and mobility of the perſon acted upon. It ſeems to be a law of the human oeconomy, that a degree of debility occurring in any function, often produces a more vigorous exertion of the ſame, or, at leaſt, an effort towards it, and that commonly in a convulſive manner.

MCCCIV.

A fifth head of the caſes of palpitation, may perhaps be of theſe ariſing from a peculiar irritability or mobility of the heart. This, indeed, may be conſidered as a predisponent cauſe only, giving occaſion to the action of the greater part of the cauſes recited above. But it is proper to obſerve, that this prediſpoſition is often the chief part of the remote cauſe, inſomuch that many of the cauſes producing palpitation would not have this effect but in perſons peculiarly prediſpoſed. This head, therefore, of the caſes of palpitation, often requires to be diſtinguiſhed from all the reſt.

MCCCV.

After thus marking the ſeveral caſes of palpitation, I think it neceſſary, with a view to the cure of this diſeaſe, to obſerve, that the ſeveral cauſes of it may be again reduced to two heads. The firſt is, of theſe conſiſting in, or depending upon, certain organic affections of the heart itſelf, or of the great veſſels immediately connected with it. The ſecond is of thoſe conſiſting in, or depending upon certain affections ſubſiſting, and acting in other parts of the body, and acting either by the force of the cauſe, or in conſequence of the mobility of the heart.

MCCCVI.

MCCCVI.

With reſpect to the caſes depending upon the firſt ſet of cauſes, I muſt repeat here what I ſaid with reſpect to the like caſes of ſyncope, that I do not know any means of curing them. They, indeed, admit of ſome palliation, *firſt*, by avoiding every circumſtance that may hurry the circulation of the blood, and, *ſecondly*, by every means of avoiding a plethoric ſtate of the ſyſtem, or any occaſional turgeſcence of the blood. In many of theſe caſes, blood-letting may give a temporary relief, but, in ſo far as debility and mobility are concerned, in ſuch caſes this remedy is likely to do harm.

MCCCVII.

With reſpect to the caſes depending upon the other ſet of cauſes, they may be various, and require very different meaſures; but we can ſay here, in general, that theſe caſes may be conſidered as of two kinds, one depending upon primary affections in other parts of the body, and acting by the force of the cauſe, and another depending upon a ſtate of mobility in the heart itſelf. In the firſt of theſe, it is obvious, that the cure of the palpitation muſt be obtained by curing the primary affection, which is not to be treated of here. In the ſecond, the cure muſt be obtained partly by diligently avoiding the occaſional cauſes, partly and chiefly by correcting the mobility of the ſyſtem, and of the heart in particular, for doing which we have treated of the proper means elſewhere.

CHAP. V.

OF DYSPNOEA,

OR

DIFFICULT BREATHING.

MCCCVIII.

The exerciſe and organs of reſpiration have ſo conſtant and conſiderable a connection with almoſt the whole of the other functions and parts of the human body, that, upon almoſt every occaſion of diſeaſe, reſpiration muſt be affected. Accordingly, ſome difficulty and diſorder in this function, are, in fact, ſymptoms very generally accompanying diſeaſe.

MCCCIX.

Upon this account, the ſymptom of difficult breathing deſerves a chief place, and an ample conſideration in the general ſyſtem of Pathology; but what ſhare of conſideration it ought to have in a treatiſe of Practice, I find it difficult to determine.

MCCCX.

On this ſubject, it is, in the firſt place, neceſſary to diſtinguiſh between the ſymptomatic and idiopathic affections, that is, between thoſe difficulties of breathing which are ſymptoms only of a more general affection, or of a diſeaſe ſubſiſting primarily in other parts than the organs of reſpiration, and that difficulty of breathing which depends upon a primary affection of the lungs themſelves. The various caſes of ſymptomatic dyſpnoea we have taken pains to enumerate in our Methodical Noſology, and, it will be obvious, they are ſuch as cannot be taken notice of here.

MCCCXI.

In our Noſology, we have alſo taken pains to point out, and enumerate the proper, or at leaſt the greater part of the proper idiopathic caſes of dyſpnoea; but from that enumeration it will, I think, readily appear, that few, and, indeed, hardly any of theſe caſes, will admit or require much of our notice in this place.

MCCXII.

The Dyſpnoea *Sicca*, *Species 2d*, the Dyſpnoea *Aerea*, *Sp. 3d*, the Dyſpnoea *Terrea*, *Sp. 4th*, and Dyſpnoea *Thoracica*, *Sp. 7th*, are ſome of them with difficulty known, and are all of them diſeaſes, which, in my opinion, do not admit of cure. All, therefore, that can be ſaid concerning them here is, that they may admit of ſome palliation; and this, I think, is to be obtained chiefly by avoiding a plethoric ſtate of the lungs, and every circumſtance that may hurry reſpiration.

MCCCXIII.

Of the Dyſpnoca *Extrinſica*, *Sp. 8th*, I can ſay no more, but that theſe external cauſes marked in the Noſology, and perhaps ſome others that might have like effects, are to be carefully avoided, or, when they have been applied, and their effects have taken place, the diſeaſe is to be palliated by the means mentioned in the laſt paragraph.

MCCCXIV.

MCCCXIV.

The other ſpecies, though enumerated as idiopathic, can hardly be conſidered as ſuch, or as requiring to be treated of here.

The Dyſpnoea *Catarrhalis*, *Sp.* *1ſt*, may be conſidered as a ſpecies of catarrh, and is pretty certainly to be cured by the ſame remedies, as that ſpecies of catarrh which depends upon the increaſed afflux of mucus to the bronchiae, more than upon any inflammatory ſtate in them.

The Dyſpnoea *Aquoſa*, *Sp.* *5th*, is certainly to be conſidered as a ſpecies of dropſy, and is to be treated by the ſame remedies as the other ſpecies of this diſeaſe.

The Dyſpnoea *Pinguedinoſa*, *Sp.* *6th*, is, in like manner, to be conſidered as a ſymptom, or local effect of the Polyſarcia, and is only to be cured by correcting the general fault of the ſyſtem.

MCCCXV.

From this view of thoſe idiopathic caſes of Dyſpnoea, which are, perhaps, all I could properly arrange under this title, it will readily appear that there is little room for treating of them here; but there is ſtill one caſe of difficult breathing which has been properly diſtinguiſhed from every other, under the title of Aſthma, and, as it deſerves our particular attention, I ſhall here ſeparately conſider it.

CHAP. VI.

OF ASTHMA.

MCCCXVI.

The term of Aſthma has been commonly applied by the vulgar, and even by many writers on the Practice of Phyſic, to every caſe of difficult breathing, that is, to every ſpecies of Dyſpnoea. The methodical Noſologiſts, alſo, have diſtinguiſhed Aſthma from Dyſpnoea chiefly, and almoſt ſolely, by the former being the ſame affection with the latter, but in a higher degree. Neither of theſe applications of the term ſeems to have been correct or proper. I am of opinion, that the term

Aſthma may be moſt properly applied, and ſhould be confined to a caſe of difficult breathing, that has peculiar ſymptoms, and depends upon a peculiar proximate cauſe, which we hope to aſſign with ſufficient certainty. It is this diſeaſe we are now to treat of, and it is nearly what Practical Writers have generally diſtinguiſhed from the other caſes of difficult breathing, by the title of Spaſmodic Aſthma, or of *Aſthma Convulſivum*; although, by not diſtinguiſhing it with ſufficient accuracy from the other caſes of Dyſpnoea, they have introduced a great deal of confuſion into their treatiſes on this ſubject.

MCCCXVII.

The diſeaſe I am to treat of, or the Aſthma, to be ſtrictly ſo called, is often a hereditary diſeaſe. It ſeldom appears very early in life, and hardly till the time of puberty, or after it. It affects both ſexes, but moſt frequently the male. I have not obſerved it to be more frequent in one kind of temperament than in another, and it does not ſeem to depend upon any general temperament of the whole body, but upon a particular conſtitution of the lungs alone. It frequently attacks perſons of a full habit; but it hardly ever continues to be repeated, for ſome length of time,x without occaſioning an emaciation of the whole body.

MCCCXVIII.

The attacks of this diſeaſe are generally in the night time, or towards the approach of night, but there are alſo ſome inſtances of their coming on in the courſe of the day. At whatever time they come on, it is commonly ſuddenly, with a ſenſe of tightneſs and ſtricture acroſs the breaſt, and a ſenſe of ſtraitneſs in the lungs impeding inſpiration. The perſon thus attacked, if in a

x viz a few years.

horizontal ſituation, is immediately obliged to get into ſomewhat of an erect poſture, and requires a free and cool air. The difficulty of breathing goes on for ſome time increaſing, and both inſpiration and expiration are performed ſlowly, and with a wheezing noiſe. In violent fits, ſpeaking is difficult and uneaſy. There is often ſome propenſity to coughing, but it can hardly be executed.

MCCCXIX.

Theſe ſymptoms often continue for many hours together, and particularly from midnight till the morning is far advanced. Then, commonly, a remiſſion takes place by degrees; the breathing becomes leſs laborious, and more full, ſo that the perſon can ſpeak and cough with more eaſe; and, if the cough brings up ſome mucus, the remiſſion becomes immediately more conſiderable,

derable, and the perſon falls into a much wiſhed for ſleep.

MCCCXX.

During theſe fits, the pulſe often continues in its natural ſtate; but in ſome perſons, the fits are attended with a frequency of pulſe, and with ſome heat and thirſt, as marks of ſome degree of fever. If urine be voided at the beginning of a fit, it is commonly in conſiderable quantity, and with little colour or odour; but, after the fit is over, the urine voided is in the ordinary quantity, of a high colour, and ſometimes depoſites a ſediment. In ſome perſons, during the fit, the face is a little fluſhed and turgid, but, more commonly, it is ſomewhat pale and ſhrunk,

MCCCXXI.

MCCCXXI.

After ſome ſleep in the morning, the patient, for the reſt of the day, continues to have more free and eaſy breathing, but it is ſeldom entirely ſuch. He ſtill feels ſome tightneſs acroſs his breaſt, cannot breathe eaſily in a horizontal poſture, and can hardly bear any motion of his body, without having his breathing rendered more difficult and uneaſy. In the afternoon, he has an unuſual flatulency of his ſtomach, and an unuſual drowſineſs; and, very frequently, theſe ſymptoms precede the firſt attacks of the diſeaſe. But, whether theſe ſymptoms appear or not, the difficulty of breathing returns towards evening, and then ſometimes gradually increaſes, till it becomes as violent as in the night before; or if, during the day, the difficulty of breathing has been moderate, and the perſon gets ſome ſleep in the firſt part of the night, he is, however, waked about midnight, or ſome time between midnight and two o'clock in the morning, and is then ſuddenly ſeized with a fit of difficult breathing, which runs the ſame courſe as the night before.

MCCCXXII.

In this manner fits return for ſeveral nights ſucceſſively; but, generally, after ſome nights paſſed in this way, the fits ſuffer more conſiderable remiſſions. This eſpecially happens when the remiſſions are attended with a more copious expectoration in the mornings, and that this continues from time to time throughout the day. In theſe circumſtances, aſthmatics, for a long time after, have not only more eaſy days, but enjoy, alſo, nights of entire ſleep, without the recurrence of the diſeaſe.

MCCCXXIII.

When this diſeaſe, however, has once taken place in the manner above deſcribed, it is ready to return, at times, for the whole of life after; but theſe returns happen with different circumſtances in different perſons.

MCCCXXIV.

In ſome perſons the fits are readily excited by external heat, whether of the weather, or of a warm chamber, and particularly by warm bathing. In ſuch perſons, fits are more frequent in ſummer, and particularly during the dog-days, than at other colder ſeaſons. The ſame perſons are alſo readily affected by changes of the weather, eſpecially by ſudden changes made from a colder to a warmer, or what is commonly the ſame thing, from a heavier to a lighter atmoſphere. ∠× The ſame perſons are alſo affected by every circumſtance ſtraiten-

∠× From hence to the end of this Paragraph ing
is to follow the end of Paragraph 1326
instead of this.

ing the capacity of the thorax, as by any ligature made, or even a plaſter laid, upon it, and a like effect happens from any increaſed bulk of the ſtomach, either by a full meal, or by wind collected in it. They are likewiſe much affected by exerciſe, or whatever elſe can hurry the circulation of the blood.

MCCCXXV.

As aſthmatic fits ſeem thus to depend upon ſome fulneſs of the veſſels of the lungs, it is probable that an obſtruction of perſpiration, and the blood being leſs determined to the ſurface of the body, may favour an accumulation in the lungs, and thereby be a means of exciting aſthma. This ſeems to be the caſe of thoſe aſthmatics, who have fits moſt frequently in the winter ſeaſon, and who have commonly more of a catarrhal affection accompanying the aſthma, which, therefore, occurs more frequently in winter, and more manifeſtly from the application of cold.

MCCCXXVI.

Beſide theſe caſes of aſthma excited by heat or cold, there are others, in which the fits are eſpecially excited by powers applied to the nervous ſyſtem, as by paſſions of the mind, by particular odours, and by irritations of ſmoke and duſt. That this diſeaſe is an affection of the nervous ſyſtem, and depending upon a mobility of the moving fibres of the lungs, appears pretty clearly from its being frequently connected with other ſpaſmodic affections depending upon mobility, ſuch as hyſteria, hypochondriaſis, dyſpepſia, and atonic gout. ×

MCCCXXVII.

From the whole of the hiſtory of aſthma now delivered, I think it will readily ap-

pear

× after this ought to follow the two last sentences in Paragraph 1324 <×which s pear that the proximate cauſe of this diſeaſe is a preternatural, and, in ſome meaſure, a ſpaſmodic, conſtriction of the muſcular fibres of the bronchiae, which not only prevents the dilatation of the bronchiae neceſſary to a free and full inſpiration, but gives alſo a rigidity which prevents a full and free expiration. This preternatural conſtriction, like many other convulſive and ſpaſmodic affections, is readily excited by a turgeſcence of the blood, or other cauſe of any unuſual fullneſs and diſtenſion of the veſſels of the lungs.

MCCCXXVIII.

This diſeaſe, as coming by fits, may be generally diſtinguiſhed from moſt other ſpecies of dyſpnoea, whoſe cauſes being more conſtantly applied, produce therefore, a more conſtant difficulty of breathing. There may, however, be ſome fallacy in this matter, as ſome of theſe cauſes may be liable to have abatements and intenſities, whereby the dyſpnoea produced by them may ſeem to come by fits; but, I believe, it is ſeldom that ſuch fits put on the appearance of the genuine aſthmatic fits deſcribed above. Perhaps, however, there is ſtill another caſe that may give more difficulty, and that is, when ſeveral of the cauſes, which we have aſſigned, as cauſes of ſeveral of the ſpecies of difficult breathing, referred to the genus of dyſpnoea, may have the effect of exciting a genuine aſthmatic fit. Whether this can happen to any but the peculiarly prediſpoſed to aſthma I am uncertain, and, therefore, whether, in any ſuch caſes, the aſthma may be conſidered as ſymptomatic, or if, in all ſuch caſes, the aſthma may not ſtill be conſidered and treated as an idiopathic diſeaſe.

MCCCXXIX.

The aſthma, though often threatening immediate death, ſeldom ×occaſions it; and many perſons have lived long under this diſeaſe. In many caſes, however, it does prove fatal, ſometimes very quickly, and, perhaps, always at length. In ſome young perſons it has ended ſoon, by occaſioning a *phthiſis pulmonalis.* After a long continuance it often ends in a hydrothorax, and, commonly, by occaſioning ſome aneuriſm of the heart, or great veſſels, it thereby proves fatal.

MCCCXXX.

As it is ſeldom that an aſthma has been entirely cured, I, therefore, cannot propoſe any method of cure which experience has approved as generally ſucceſsful. But the diſeaſe admits of alleviation, in ſeveral re-

ſpects,

×I have never known a Person dye during the time of the Asthmatic fit.

ſpects, from the uſe of remedies; and my buſineſs now ſhall be chiefly to offer ſome remarks upon the choice and uſe of the remedies which have been commonly employed in caſes of aſthma.

MCCCXXXI.

As the danger of an aſthmatic fit ariſes chiefly from the difficult tranſmiſſion of the blood through the veſſels of the lungs, threatening ſuffocation, ſo the moſt probable means of obviating this ſeems to be blood-letting; and, therefore, in all violent fits, practitioners have had recourſe to this remedy. In firſt attacks, and eſpecially in young and plethoric perſons, blood-letting may be very neceſſary, and is commonly allowable. But it is alſo evident, that, under the frequent recurrence of fits, blood-letting cannot be frequently repeated without exhauſting and weakening the patient too much. It is further to be obſerved,

ſerved, that blood-letting is not ſo neceſſary as might be imagined, as the paſſage of the blood through the lungs is not ſo much interrupted as has been commonly ſuppoſed. This, I particularly conclude from hence, that, inſtead of the ſuffuſion of face which is the uſual effect of ſuch interruption, the face, in aſthmatic fits, is often ſhrunk and pale. I conclude the ſame alſo from this, that, in aſthmatic fits, blood-letting does not commonly give ſo much relief, as, upon the contrary ſuppoſition, might be expected.

MCCCXXXII.

As I have alledged above that a turgeſcence of the blood is frequently the exciting cauſe of aſthmatic fits, ſo it might be ſuppoſed that a plethoric ſtate of the ſyſtem might have a great ſhare in producing a turgeſcence of the blood in the lungs, and eſpecially, therefore, that blood-letting might be a proper remedy in aſthma. I allow it to be ſo in the firſt attacks of the diſeaſe; but, as the diſeaſe, by continuing, generally takes off the plethoric ſtate of the ſyſtem, ſo, after the diſeaſe has continued for ſome time, I alledge that bloodletting becomes leſs and leſs neceſſary.

MCXCCXXIII.

Upon the ſuppoſition of aſthmatics being in a plethoric ſtate, purging might be ſuppoſed to prove a remedy in this diſeaſe; but, both becauſe the ſuppoſition is not commonly well founded, and becauſe purging is ſeldom found to relieve the veſſels of the thorax, this remedy has not appeared to be well ſuited to aſthmatics; and large purging has always been found to do much harm. But as aſthmatics are always hurt by the ſtagnation and accumulation of matters in the alimentary canal, ſo coſtiveneſs

neſs muſt be avoided, and an open belly proves uſeful. In the time of fits, the employment of emollient, and moderately laxative glyſters, has been found to give conſiderable relief.

MCCCXXXIV.

As a flatulency of the ſtomach, and other ſymptoms of indigeſtion, are frequent attendants of aſthma, and very troubleſome to aſthmatics, ſo, both for removing theſe ſymptoms, and for taking off all determination to the lungs, the frequent uſe of gentle vomits is proper in this diſeaſe. In certain caſes, where a fit was expected to come on in the courſe of the night, a vomit given in the evening has frequently ſeemed to prevent it.

MCCCXXXV.

MCCCXXXV.

Bliſtering between the ſhoulders, or upon the breaſt, has been frequently employed to relieve aſthmatics; but, in the pure ſpaſmodic aſthma we treat of here, I have rarely found bliſters uſeful, either in preventing or relieving fits.

MCCCXXXVI.

Iſſues are certainly uſeful in obviating plethora; but, as ſuch indications ſeldom ariſe in caſes of aſthma, ſo iſſues have been ſeldom found uſeful in this diſeaſe.

MCCCXXXVII.

As aſthmatic fits are ſo frequently excited by a turgeſcence of the blood, ſo the obviating and allaying of this by acids and neutral ſalts, ſeems to have been at all times the object of practitioners. See Floyer on the aſthma.

MCCCXXXVIII.

Though a plethoric ſtate of the ſyſtem may ſeem to diſpoſe to aſthma, and the occaſional turgeſcence of the blood may ſeem to be frequently the exciting cauſe of the fits, yet it is evident that the diſeaſe muſt have ariſen chiefly from a peculiar conſtitution in the moving fibres of the bronchiae, diſpoſing them, upon various occaſions, to fall into a ſpaſmodic conſtriction; and, therefore, that the entire cure of the diſeaſe can only be expected from the correcting of that prediſpoſition, or from correcting the preternatural mobility or irritability of the lungs in that reſpect.

MCCCXXXIX.

In caſes wherein this prediſpoſition depends upon original conformation, the cure muſt be difficult, and perhaps impoſſible; but it may, perhaps, be moderated by the uſe of antiſpaſmodics. Upon this footing, various remedies of that kind have been commonly employed, and particularly the foetid gums, but we have not found them of any conſiderable efficacy, and have obſerved them to be ſometimes hurtful by their heating too much. Some other antiſpaſmodics which might be ſuppoſed powerful, ſuch as muſk, have not been properly tried. The vitriolic aether has been found to give relief, but its effects are not laſting.

MCCCXL.

As in other ſpaſmodic affections, ſo, in this, the moſt certain and powerful antiſpaſmodic

ſpaſmodic is opium. I have often found it effectual, and generally ſafe; and, if there have ariſen doubts with reſpect to its ſafety, I believe they have ariſen from not diſtinguiſhing between certain plethoric and inflammatory caſes of dyſpnoea, improperly named aſthma, and the genuine ſpaſmodic aſthma we treat of here.

MCCCXLI.

As, in many caſes, this diſeaſe depends upon a prediſpoſition which cannot be corrected by our art, ſo, in ſuch caſes, the patient can only eſcape the diſeaſe by avoiding the occaſional, or exciting cauſes, which we have endeavoured to point out above. It is, however, difficult to give any general rules here, as different aſthmatics have their different idioſyncraſies× with reſpect to externals. Thus, one aſthmatic finds himſelf eaſieſt living in

the

× peculiarities of temperaments.

the midſt of a great city, while another cannot breathe but in the free air of the country. In the latter caſe, however, moſt aſthmatics bear the air of a low ground, if tolerably free and dry, better than that of the mountain.

MCCCXLII.

In diet, alſo, there is ſome difference to be made with reſpect to different aſthmatics. None of them bear a large or full meal, or any food that is of ſlow and difficult ſolution in the ſtomach; but many of them bear animal food of the lighter kinds, and in moderate quantity. The uſe of vegetables which readily prove flatulent are always very hurtful. In recent aſthma, and eſpecially in the young and plethoric, a ſpare, light, and cool diet, is proper, and commonly neceſſary; but, after the diſeaſe has continued for years, aſthmatics commonly bear, and even require, a tolerably full diet, though, in all caſes, a very full diet is very hurtful.

MCCCXLIII.

In drinking, water, or cool watery liquors, is the only ſafe and fit drink for aſthmatics; and all liquors ready to ferment, and become flatulent, are hurtful to them. Few aſthmatics can bear any kind of ſtrong drink; and any exceſs in ſuch is always very hurtful to them. As aſthmatics are commonly hurt by taking warm or tepid drink, ſo, both upon that account, and upon account of the liquors weakening the nerves of the ſtomach, neither tea nor coffee is proper in this diſeaſe.

MCCCXLIV.

Aſthmatics commonly bear no bodily motion eaſily but that of the moſt gentle kind. Riding, however, on horſeback, or going in a carriage, and eſpecially ſailing, are very often uſeful to aſthmatics.

CHAP.

CHAP. VII.

OF THE CHINCOUGH,

OR

HOOPING COUGH.

MCCCXLV.

This diſeaſe is commonly epidemic, and manifeſtly contagious. It ſeems to proceed from a contagion of a ſpecific nature, and of ſingular quality. It does not, like moſt other contagions, neceſſarily produce a fever; nor does it, like moſt others, occaſion any eruption, or produce, otherwiſe, any evident change in the ſtate of the human

man fluids. It has, in common with the catarrhal contagion, and with that of the meaſles, a peculiar determination to the lungs, but with particular effects there, very different from thoſe of the other two, as will appear from the hiſtory of this diſeaſe now to be delivered.

MCCCXLVI.

This contagion, like ſeveral others, affects perſons but once in the courſe of their lives, and, therefore, neceſſarily, children are moſt commonly the ſubjects of this diſeaſe; but there are many inſtances of it occurring in perſons conſiderably advanced in life, though it is probable, that the further that perſons are advanced in life, they are the leſs liable to be affected with this contagion.

MCCCXLVII.

MCCCXLVII.

The diſeaſe commonly comes on with the ordinary ſymptoms of a catarrh ariſing from cold, and often, for many days, keeps entirely to that appearance; and I have had inſtances of a diſeaſe, which, though evidently ariſing from the chincough contagion, never put on any other form than that of a common catarrh.

This, however, ſeldom happens; for, generally, in the ſecond, and, at fartheſt, in the third week after the attack, the diſeaſe puts on its peculiar, and characteriſtic ſymptom, a convulſive cough. This is a cough in which the expiratory motions peculiar to coughing are made with more frequency, rapidity, and violence, than uſual. As theſe circumſtances, however, in different inſtances of coughing, are in very different degrees, ſo no exact limits can be put to determine when the cough can be ſtrictly ſaid to be convulſive; and it is therefore eſpecially by another circumſtance that the chincough is diſtinguiſhed from every other form of cough. This circumſtance is, when many expiratory motions have been convulſively made, and thereby the air is in great quantity thrown out of the lungs, a full inſpiration is neceſſarily and ſuddenly made, which, by the air ruſhing in through the glottis with unuſual velocity, gives a peculiar ſound. This ſound is ſomewhat different in different caſes, but is, in general, called a Hoop, and from it the whole of the diſeaſe is called the Hooping Cough. When this ſonorous inſpiration has happened, the convulſive coughing is again renewed, and continues in the ſame manner as before till a quantity of mucus is thrown up from the lungs, or the contents of the ſtomach are thrown up by vomiting. Either of theſe evacuations commonly put an end to the coughing, and the patient remains free from it for ſome time after. Sometimes it is only after ſeveral alternate fits of coughing and hooping that expectoration or vomiting takes place, but it is commonly after the ſecond coughing that theſe happen, and put an end to the fit.

MCCCXLVIII.

When the diſeaſe, in this manner, has taken its proper form, it generally continues for a long time after, and generally from one month to three, but ſometimes much longer, and that with very various circumſtances.

MCCCXLIX.

The fits of coughing return at various intervals, rarely obſerving any exact period. They happen frequently in the courſe of the day, and more frequently, ſtill, in the courſe of the night. The patient has commonly ſome warning of their coming on; and, to avoid that violent and painful concuſſion which the coughing gives to the whole body, he clings faſt to any thing that is near to him, or demands to be held faſt by any perſon that he can come at.

When the fit is over, the patient ſometimes breathes faſt, and ſeems fatigued for a little after, but, in many, this appears very little; and children are commonly ſo entirely relieved, that they immediately return to their play, or what elſe they were occupied in before.

MCCCL.

If it happens that the fit of coughing ends in vomiting up the contents of the ſtomach, the patient is commonly immediately after ſeized with a ſtrong craving, and demand for food, and takes it in very greedily.

MCCCLI.

At the firſt coming on of this diſeaſe, the expectoration is ſometimes none at all, or of a thin mucus only, and while this continues to be the caſe, the fits of coughing are more violent, and continue longer; but, commonly, the expectoration ſoon becomes conſiderable, and a very thick mucus, often in great quantity, is thrown up; and as this is more readily brought up, the fits of coughing are of ſhorter duration.

MCCCLII.

The violent fits of coughing frequently interrupt the free tranſmiſſion of the blood through the lungs, and, thereby, the free return of blood from the veſſels of the head. This occaſions that turgeſcence and ſuffuſion of face which commonly attends the fits of coughing, and ſeems to occaſion alſo thoſe eruptions of blood from the noſe, and even from the eyes and ears, which ſometimes happen in this diſeaſe.

MCCCLIII.

This diſeaſe often takes place in the manner we have now deſcribed, without any pyrexia attending it; but, though Sydenham had ſeldom obſerved it, we have found the diſeaſe very frequently accompanied with pyrexia, ſometimes from the very beginning, but more frequently only after the diſeaſe had continued for ſome time. When it does accompany the diſeaſe, we have not found it appearing under any regular intermittent form. It is conſtantly in ſome degree preſent, but, with evident exacerbations towards evening, continuing till next morning.

MCCCLIV.

Another ſymptom, very frequently attending the chincough, is a difficulty of breathing, and that not only immediately before and after fits of coughing, but as conſtantly preſent, though in different degrees, in different perſons. I have hardly ever ſeen an inſtance of a fatal chincough, in which a conſiderable degree of pyrexia and dyſpnoea had not been for ſome time conſtantly preſent.

MCCCLV.

When, by the power of the contagion, this diſeaſe has once taken place, the fits of coughing are often repeated, without any evident exciting cauſe; but, in many caſes, the contagion may be conſidered as giving a prediſpoſition only, and the frequency of fits depend, in ſome meaſure, upon various exciting cauſes, ſuch as, violent exerciſe; a full meal; the having taken in food of difficult ſolution; irritations of the lungs by duſt, ſmoke, or diſagreeable odours of a ſtrong kind, and eſpecially any conſiderable emotion of the mind.

MCCCLVI.

Such are the chief circumſtances of this diſeaſe, and it is of various event, which, however, may be commonly foreſeen by attending to the following conſiderations:

The younger children are they are in the greater danger from this diſeaſe; and of of thoſe to whom it proves fatal, there are many more under two years old than above it.

The older that children are they are the more ſecure againſt an unhappy event; and this I hold to be a very general rule, though I own there are many exceptions to it.

Children born of phthiſical and aſthmatic parents are in the greateſt danger from this diſeaſe.

When the diſeaſe, beginning in the form of a catarrh, is attended with fever and difficult breathing, and with little expectoration, it often proves fatal, without taking on the form of the hooping cough; but, in moſt of ſuch caſes, the coming on of the convulſive cough and hooping, bringing on, at the ſame time, a more free expectoration, generally removes the danger.

When the diſeaſe is fully formed, if the fits are neither frequent nor violent, with moderate expectoration, and the patient, during the intervals of the fits, is eaſy, keeps his appetite, gets ſleep, and is without fever or difficult breathing, the diſeaſe is attended with no danger, and theſe circumſtances becoming daily more favourable, the diſeaſe very ſoon ſpontaneouſly terminates.

An expectoration either very ſcanty, or very copious, is attended with danger, eſpecially if the latter circumſtance is attended with great difficulty of breathing.

Thoſe caſes in which the fits terminate by a vomiting, and are immediately followed by a craving of food, are generally without danger.

A moderate haemorrhagy from the noſe often proves ſalutary, but very large haemorrhagies are generally very hurtful.

This diſeaſe, coming upon perſons under a ſtate of much debility, has very generally an unhappy event.

The danger of this diſeaſe ſometimes ariſes from the violence of the fits of coughing, occaſioning apoplexy, epilepſy, or immediate ſuffocation; but theſe accidents are very rare, and the danger of the diſeaſe ſeems generally to be in proportion to the fever and dyſpnoea attending it.

MCCCLVII.

The cure of this diſeaſe has been always conſidered as difficult, whether the purpoſe be to obviate its fatal tendency, when it is violent, or merely to ſhorten the courſe of it when it is mild. When the contagion is recent, and continues to act, we neither know how to correct, nor how to expel it; and, therefore, the diſeaſe neceſſarily continues for ſome time; but it is probable that the contagion, in this as in other inſtances, ceaſes at length to act, and that then the diſeaſe continues, as in other convulſive affections, by the power of habit alone.

MCCCLVIII.

From this view of the matter I maintain, that the practice muſt be different, and adapted to two different indications, according to the period of the diſeaſe. At the beginning of the diſeaſe, and for ſome time after, the remedies to be employed muſt be ſuch as may obviate the violent effects of the diſeaſe, and the fatal tendency of it; but, after the diſeaſe has continued for ſome time, and is without any violent ſymptoms, the only remedies which can be required are thoſe which may interrupt its courſe, and put an entire ſtop to it ſooner than it would have ſpontaneouſly ceaſed.

MCCCLIX.

For anſwering the firſt indication. In plethoric ſubjects, or, in others, when, from the circumſtances of the cough and fits, it appears that the blood is difficultly tranſmitted through the lungs, blood-letting is a neceſſary remedy; and it may be even neceſſary to repeat it eſpecially in the beginning of the diſeaſe; but, as ſpaſmodic affections do not commonly admit of much bleeding, ſo it is ſeldom proper in the chincough to repeat this remedy often.

MCCCLX.

As coſtiveneſs frequently attends this diſeaſe, ſo it is neceſſary to obviate or remove it by laxatives employed; and keeping an open belly is generally uſeful; but large evacuations in this way are commonly hurtful.

MCCCLXI.

To obviate or remove the inflammatory determination to the lungs, that ſometimes occurs in this diſeaſe, bliſtering is often uſeful, and even repeated bliſtering has been of ſervice; but iſſues have not ſo much effect, and ſhould by no means ſuperſede the repeated bliſtering that may be indicated. When bliſters are proper, they are more effectual when applied to the thorax than when applied to any diſtant parts.

MCCCLXII.

Of all other remedies, emetics are the moſt uſeful in this diſeaſe, both, in general, by interrupting the return of ſpaſmodic affections, and, in particular, by determining very powerfully to the ſurface of the body, and thereby taking off determinations to the lungs. For theſe purpoſes, I think full vomiting is frequently to be employed; and, in the intervals neceſſary to be left between the times of full vomiting, nauſeating doſes of the antimonial emetics may be uſeful. I have never found the *ſulphur auratum*, ſo much praiſed by Cloſſius, to be a convenient medicine, on account of the uncertainty of its doſe; and the tartar emetic, employed in the manner directed by the late Dr Fothergill, has appeared to be more uſeful.

MCCCLXIII.

Theſe are the remedies to be employed in the firſt ſtage of the diſeaſe for obviating its fatal tendency, and putting it into a ſafe train. But in the ſecond ſtage, when, I ſuppoſe the contagion has ceaſed to act, and that the diſeaſe continues merely by the power of habit, a different indication ariſes, and different remedies are to be employed.

MCCCLXIV.

This diſeaſe, which often continues for a long time, does not, in my opinion, continue during the whole of that time in conſequence of the contagion's remaining in the body, and continuing to act in it. That the diſeaſe does often continue long after the contagion has ceaſed to act, and that, too, by the power of habit alone, appears to me probable from hence, that terror has frequently cured the diſeaſe; that any conſiderable change in the ſtate of the ſyſtem, ſuch as the coming on of the ſmall-pox,× has alſo cured it; and, laſtly, that it has been cured by antiſpaſmodic and tonic medicines, whilſt none of all theſe means of cure can be ſuppoſed either to correct or to expel a morbific matter, tho' they are evidently ſuited to change the ſtate and habits of the nervous ſyſtem.

MCCCLXV.

From this view we are directed to the indication that may be formed, and, in a great meaſure, to the remedies which may be employed in what we ſuppoſe to be the ſecond ſtage of the diſeaſe. It may, perhaps, be alledged, that this indication of ſhortening the courſe of the diſeaſe, is not very important or neceſſary, as it ſuppoſes that the violence and danger is over, and, in conſequence, that the diſeaſe

will

× The attack of Meaſles he has also known to cure the Disease.

will ſoon ſpontaneouſly ceaſe. The laſt ſuppoſition, however, is not well founded, as the diſeaſe, like many other convulſive and ſpaſmodic affections, may continue for a long time by the power of habit alone, and by the repetition of paroxyſms may have hurtful effects, more eſpecially as the violence of paroxyſms, and, therefore, their hurtful effects, may be much aggravated by various external cauſes that may be accidentally applied. Our indication, therefore, is proper, and we proceed to conſider the ſeveral remedies which may be employed to anſwer it.

MCCCLXVI.

Terror may poſſibly be a powerful remedy, but it is difficult to meaſure the degree of it that ſhall be produced; and, as a ſlight degree of it may be ineffectual, and a high degree of it dangerous, I cannot propoſe to employ it.

MCCCLXVII.

The other remedies which we ſuppoſe ſuited to our ſecond indication, and which, indeed, have been frequently employed in this diſeaſe, are antiſpaſmodics or tonics.

Of the antiſpaſmodics, caſtor has been particularly recommended by Dr Morris, but in many trials, we have not found it effectual.

With more probability muſk has been employed; but whether it be from our not having it of a genuine kind, or not employing it in ſufficiently large doſes, I cannot determine, but we have not found it commonly ſucceſsful. Of antiſpaſmodics, the moſt certainly powerful is opium; and, when there is no conſiderable fever, or difficulty of breathing preſent, opium has often proved uſeful in moderating the violence of the chincough; but I have not known it employed ſo as entirely to cure the diſeaſe.

If hemlock has proved a remedy in this diſeaſe, as we muſt believe from Dr Butter's accounts, I agree with that author, that it is to be conſidered as an antiſpaſmodic. Upon this ſuppoſition it is a probable remedy; and, from the accounts of Dr Butter, and ſome others, it ſeems to have been often uſeful; but, in our trials, it has often diſappointed us, perhaps from the preparation of it not having been always proper.

MCCLXVIII.

Of the tonics, I conſider the cupmoſs, formerly celebrated, as of this kind, as alſo the bark of the miſletoe, but I have had no experience of either, as I have always truſted to the Peruvian bark. I conſider the uſe of this medicine as the moſt certain means of curing the diſeaſe in its ſecond ſtage; and, when there has been little fever preſent, and a ſufficient quantity of the bark has been given, it has ſeldom failed of ſoon putting an end to the diſeaſe.

MCCCLXIX.

When convulſive diſorders may be ſuppoſed to continue by the force of habit alone, it has been found that a conſiderable change in the whole of the circumſtances and manner of life has proved a cure of ſuch diſeaſes; and analogy has applied this in the caſe of the chincough ſo far, that a change of air has been employed, and ſuppoſed to be uſeful. In ſeveral inſtances I have obſerved it to be ſo; but I have never found the effects of it durable, or ſufficient to put an entire ſtop to the diſeaſe.

SECT. III.

OF THE SPASMODIC AFFECTIONS IN THE NATURAL FUNCTIONS.

CHAP. VIII.

OF THE PYROSIS,

OR WHAT IS NAMED IN SCOTLAND

THE WATER BRASH.

MCCCLXX.

The painful ſenſations referred to the ſtomach, and which are probably occaſioned by real affections of this organ, are of different kinds. Probably, however, they proceed from affections of different natures, and ſhould therefore be diſtinguiſhed by different appellations; but I muſt own that the utmoſt preciſion in this matter will be difficult. In my eſſay towards a methodical Noſology, I have, however, attempted it. For theſe pains that are either acute and pungent, or accompanied with a ſenſe of diſtenſion, or with a ſenſe of conſtriction, if they are, at the ſame time, without any ſenſe of acrimony or heat, I employ the appellation of Gaſtrodynia. To expreſs thoſe painful or uneaſy ſenſations which are from a ſenſe of acrimony irritating the part, or from ſuch a ſenſe of heat, as the application of acrids, whether externally or internally applied, often gives, I employ the term of Cardialgia, and by this I particularly mean to denote theſe feelings which are expreſſed by the term Heartburn in the Engliſh language. I think the term Soda has been commonly employed by Practical Writers to expreſs an affection attended with feelings of the ſame kind.

MCCCLXXI.

MCCCLXXI.

Beſide the pains denoted by the terms Gaſtrodynia, Periadynia, Cardialgia, and Soda, there is, I think, another painful ſenſation, different from all of theſe, which is named by Mr Sauvages Pyroſis *Suecica*, and his account of it is taken from Linnaeus, who names it Cardialgia Sputatoria. Under the title of Pyroſis, Mr Sauvages has formed a Genus, of which the whole of the ſpecies, except the eight under the title we have juſt now mentioned, are all of them ſpecies of the Gaſtrodynia or of the Cardialgia; and, if there is a Genus to be formed under the title of Pyroſis, it can only comprehend the ſpecies I have mentioned. In this caſe, indeed, I own that the term is not very proper; but my averſion to introduce new names has made me continue to employ the term of Mr Sauvage.

MCCCLXXII.

MCCCLXXII.

The Gaſtrodynia and Cardialgia I judge to be, for the moſt part, ſymptomatic affections, and, therefore, have given them no place in this work; but the Pyroſis, as an idiopathic diſeaſe, and never before treated of in any ſyſtem, I propoſe to treat of here.

MCCCLXXIII.

It is a diſeaſe frequent among people in lower life, but occurs alſo, though more rarely, in people of better condition. Tho' frequent in Scotland, it is by no means ſo frequent as Linnaeus reports it to be in Lapland. It appears moſt commonly in perſons under middle age, but ſeldom in any perſons before the age of puberty. When it has once taken place, it is ready to recur occaſionally for a long time after; but it ſeldom appears in perſons conſiderably advanced in life. It affects both ſexes, but more frequently the female. It ſometimes attacks pregnant women, and ſome women, only when they are in that condition. Of other women, it more frequently affects the unmarried; and, of the married, moſt frequently the barren. I have had many inſtances of it in women labouring under a *fluor albus*.

MCCCLXXIV.

The fits of this diſeaſe uſually come on in the morning and forenoon, when the ſtomach is empty. The firſt ſymptom of it, is a pain at the pit of the ſtomach, with a ſenſe of conſtriction, and as if the ſtomach was drawn towards the back; the pain is increaſed by raiſing the body into an erect poſture, and, therefore, the body is bended forward. This pain is often very ſevere; and, after continuing for ſome time, it brings on an eructation of a thin watery fluid in conſiderable quantity. This fluid has ſometimes an acid taſte, but, very often, is without this, and abſolutely inſipid. The eructation is for ſome time frequently repeated; and does not immediately give relief to the pain which preceded it, but does ſo at length, and puts an end to the fit.

MCCCLXXV.

The fits of this diſeaſe commonly come on without any evident exciting cauſe; and I have not found it ſteadily connected with any particular diet. It attacks perſons uſing animal food, but, I think, more frequently thoſe living on milk and farinacea. It ſeems often to be excited by cold applied to the lower extremities; and is readily excited by any conſiderable emotion of mind. It is often without any ſymptoms of dyſpepſia.

MCCCLXXVI.

The nature of this affection is not very obvious, but I think it may be explained in this manner. It ſeems to begin by a ſpaſm of the muſcular fibres of the ſtomach, which is afterwards, in a certain manner, communicated to the blood-veſſels and exhalants, ſo as to increaſe the impetus of the fluids in the veſſels, while a conſtriction takes place on their extremities. The increaſed impetus pours out a larger quantity of fluid than uſual, while the conſtriction upon their extremities allows only the pure watery parts to be poured out, analogous, as I judge, in every reſpect, to what happens in the *diabetes hyſtericus*.

MCCCLXXVII.

The practice in this diſeaſe is as difficult as the theory. The paroxyſm is only to be certainly relieved by opium. Other antiſpaſmodics, as vitriolic aether, and volatile alkali, are ſometimes of ſervice, but not conſtantly ſo. Although opium, and other antiſpaſmodics, relieve the fits, they have no effect in preventing their recurrence. For this purpoſe, the whole of the remedies of dyſpepſia have been employed without ſucceſs. Of the uſe of the *nux vomica* mentioned as a remedy by Linnaeus I have had no experience.

CHAP. IX.

OF THE COLIC.

MCCCLXXVIII.

The principal ſymptom of this diſeaſe is a pain felt in the lower belly. It is ſeldom fixed and pungent in one part, but, in ſome meaſure, ſpreads over the whole of the belly, and, particularly, with a ſenſe of twiſting or wringing round the navel. With this pain the navel and teguments of the belly are frequently drawn inwards, and often the muſcles of the belly are ſpaſmodically contracted, and this as in ſeparate portions, giving the appearance of a bag full of round balls.

MCCCLXXIX.

MCCCLXXIX.

Such pains, in a certain degree, ſometimes occur in caſes of diarrhoea and cholera, but theſe are leſs violent and more tranſitory, and are named Gripings. It is only when more violent and permanent, and attended with coſtiveneſs, that they conſtitute colic. This is alſo commonly attended with vomiting, which, in many caſes, is frequently repeated, eſpecially when any thing is taken down into the ſtomach; and, in ſuch vomitings, not only the contents of the ſtomach are thrown up, but, alſo, the contents of the duodenum, and, therefore, a quantity of bile.

MCCCLXXX.

In ſome caſes of colic, the periſtaltic motion of the inteſtines is inverted through the whole length of the alimentary canal, in ſuch a manner that the contents of the great guts, and, therefore, ſtercoraceous matter is thrown up by vomiting; and the ſame inverſion appears ſtill more clearly from this, that what is thrown into the rectum by glyſter is again thrown out by the mouth. In theſe circumſtances of inverſion the diſeaſe has been named Ileus, or the Iliac Paſſion, and this has been ſuppoſed to be a peculiar diſeaſe diſtinct from colic, but to me it appears that the two diſeaſes are owing to the ſame proximate cauſe, and have the ſame ſymptoms, only in different degree.

MCCCLXXXI.

The colic is often without any pyrexia attending it; ſometimes, however, an inflammation comes upon the part of the inteſtine eſpecially affected, and this inflammation aggravates all the ſymptoms of the diſeaſe, being probably what brings on the moſt conſiderable inverſion of the periſtaltic motion; and, as the ſtercoraceous vomiting is what eſpecially diſtinguiſhes the Ileus, this has been conſidered as always depending on an inflammation of the inteſtines. However, I can affirm, that, as there are inflammations of the inteſtines without ſtercoraceous vomiting, ſo I have ſeen inſtances of ſtercoraceous vomiting without inflammation; and there is, therefore, no ground for diſtinguiſhing ileus from colic but as a higher degree of the ſame affection.

MCCCLXXXII.

The ſymptoms of the colic, and the diſſections of bodies dead of this diſeaſe, ſhew very clearly, that it depends upon a ſpaſmodic conſtriction of a part of the inteſtines, and that this, therefore, is to be conſidered as the proximate cauſe of the diſeaſe. In ſome of the diſſections of perſons dead of this diſeaſe, an intus-ſuſception has been remarked to have happened; but whether this be conſtantly the caſe in all the appearances of ileus is not certainly determined.

MCCCLXXXIII.

The colic has commonly been conſidered as being of different ſpecies, but I cannot follow the writers on this ſubject in the diſtinctions they have eſtabliſhed. So far, however, as a difference of the remote cauſe conſtitutes a difference of ſpecies, a diſtinction may, perhaps, be admitted; and, accordingly, in our Noſology, I have marked ſeven different ſpecies; but, I am well perſuaded, that, in all theſe different ſpecies, the proximate cauſe is the ſame, that is, a ſpaſmodic conſtriction of a part of the inteſtines, and, conſequently, that in all theſe caſes the indication of cure is the ſame, that is, to remove the conſtriction mentioned. Even in the ſpecies named *Stercorea, Calloſa,*

loſa, and *Calculoſa*, in which the diſeaſe depends upon an obſtruction of the inteſtine, I am perſuaded that theſe obſtructions do not produce the ſymptoms of colic, excepting in ſo far as they produce ſpaſmodic conſtrictions of the inteſtines; and, therefore, that the means of cure in theſe caſes, ſo far as they admit of cure, muſt be obtained by the ſame means which the general indication above mentioned ſuggeſts.

MCCCLXXXIV.

The cure, then, of the colic, univerſally, is to be obtained by removing the ſpaſmodic conſtrictions of the inteſtines; and the remedies ſuited to this purpoſe may be referred to three general heads:

1. The taking off the ſpaſm by various antiſpaſmodic powers.

2. The exciting the action of the inteſtines by purgatives, or other means.

3. The employing mechanical dilatation.

MCCCLXXXV.

Before entering upon a more particular account of theſe remedies, it will be proper to obſerve, that, in all caſes of violent colic, it is adviſeable to practice blood-letting, both as it may be uſeful in obviating the inflammation often to be apprehended, and even as it may be a means of relaxing the ſpaſm of the inteſtine. This remedy may, perhaps, be improper in perſons of a weak and lax habit, but in all perſons of tolerable vigour it will be a ſafe remedy; and in all caſes where there is the leaſt ſuſpicion of an inflammation actually coming on, it will be abſolutely neceſſary. Nay, it will even be proper to repeat it, perhaps ſeveral times, if, with a full[x] and hard pulſe, the appearance of the blood drawn, and the relief obtained by the firſt bleeding, ſhall authoriſe ſuch repetition.

MCCCLXXXVI.

[x] The word "full" is not so proper here; as in any degree of Inflamn. on the Intestines, the Pulse is often small & contracted with its hardness, & of course not full.

MCCCLXXXVI.

The antiſpaſmodic powers that may be employed, are the application of heat in a dry or humid form, the application of bliſters, the uſe of opium, and the uſe of mild oils.

The application of heat, in a dry form, has been employed by applying to the belly of the patient a living animal, or bladders filled with warm water, or bags of ſubſtances which long retain their heat; and all theſe have ſometimes been applied with ſucceſs; but none of them ſeem to me ſo powerful as the application of heat in a humid form.

This may be employed either by the immerſion of a great part of the body in warm water, or by fomenting the belly with cloths wrung out of hot water. The immerſion has advantages from the application of it to a greater part of the body, and, particularly, to the lower extremities; but immerſion cannot always be conveniently practiſed, and fomentation may have the advantage of being longer continued, and it may have nearly all the benefit of immerſion, if it be, at the ſame time applied both to the belly and to the lower extremities.

MCCCLXXXVII.

From conſidering that the teguments of the lower belly have ſuch a connection with the inteſtines, as, at the ſame time, to be affected with ſpaſmodic contractions, we perceive that bliſters applied to the belly may have the effect of taking off the ſpaſms both from the muſcles of the belly and from the inteſtines, and, accordingly, bliſtering has often been employed in the colic with advantage. Analogous to this, rubefacients× applied to the belly have been frequently found uſeful.

MCCCLXXXVIII.

× Volatile Oil.

MCCCLXXXVIII.

The uſe of opium, in colic, may ſeem to be an ambiguous remedy. Very certainly it may, for ſome time, relieve the pain, which is often ſo violent and urgent, that it is difficult to abſtain from the uſe of ſuch a remedy. At the ſame time, the uſe of opium retards or ſuſpends the periſtaltic motion ſo much, as to allow the inteſtines to fall into conſtrictions, and may, therefore, while it relieves the pain, render the cauſe of the diſeaſe more obſtinate. On this account, and, further, as opium prevents the operation of purgatives, ſo often neceſſary in this diſeaſe, many practitioners are averſe to the uſe of it, and ſome entirely reject the uſe of it as hurtful. There are, however, others who think they can employ opium in this diſeaſe with much advantage.

In all caſes where the colic comes on without any previous coſtiveneſs, and ariſes

riſes from cold, from paſſions of the mind, or other cauſes × which operate eſpecially on the nervous ſyſtem, opium proves a ſafe and certain remedy; but in caſes which have been preceded by long coſtiveneſs, or where the colic, though not preceded by coſtiveneſs, has, however, continued for ſome days without a ſtool, ſo that a ſtagnation of faeces in the colon is to be ſuſpected, the uſe of opium is of doubtful effect. In ſuch caſes, unleſs a ſtool has been firſt procured by medicine, opium cannot be employed but with ſome hazard of aggravating the diſeaſe. However, even in theſe circumſtances of coſtiveneſs, when without inflammation, the violence of the ſpaſm is to be ſuſpected, when vomiting prevents the exhibition of purgatives, and when, with all this, the pain is extremely urgent, opium is to be employed, not only as an anodyne, but alſo as an antiſpaſmodic, neceſſary to favour the operation of purgatives, and may be ſo employed, when,

× as the introduction of Lead.

either at the ſame time with the ×opiate, or not long after it, a purgative can be exhibited.

Is the *hyoſciamus*,* as often ſhowing, along with its narcotic, a purgative quality, better ſuited to this diſeaſe than opium?

MCCCLXXXIX.

It is ſeemingly on good grounds that ſeveral practitioners have recommended the large uſe of mild oils in this diſeaſe, both as antiſpaſmodics and as laxatives; and, where the palate and ſtomach could admit them, I have found them very uſeful; but, as there are few Scottiſh ſtomachs that can admit a large uſe of them, I have had few opportunities of employing them.

× Some give an Opiate & purgative conjoined. I prefer giving the Purgative separate, perhaps about four hours after the Opiate.

MCCCXC.

The *ſecond* ſet of remedies adapted to the cure of colic are purgatives, which, by exciting the action of the inteſtines, either above or below the obſtructed place, may remove the conſtriction; and, therefore, theſe purgatives may be given either by the mouth, or thrown by glyſter into the anus. As the diſeaſe is often ſeated in the great guts; as glyſters, by having a more ſudden operation, may give more immediate relief; and as purgatives given by the mouth are ready to be rejected by vomiting; ſo it is common, and, indeed, proper, to attempt curing the colic in the firſt place by glyſters. Theſe may at firſt be of the mildeſt kind, conſiſting of a large bulk of water, with ſome quantity of a mild oil; and ſuch are ſometimes ſufficiently efficacious; however, they are not always ſo; and it is commonly neceſſary to render them

* I believe it might; but the difficulty of getting the Medicine has not afforded me sufficient experience.

more powerfully ſtimulant by the addition of neutral ſalts, of which the moſt powerful is the common, or marine ſalt. If theſe ſaline glyſters, as ſometimes happens, are rendered again too quickly, and on this account, or otherwiſe, are found ineffectual, it may be proper, inſtead of theſe ſalts, to add to the glyſters an infuſion of ſenna, or of ſome other purgative that can be extracted by water. The antimonial wine may be ſometimes employed in glyſters with advantage. Hardly any glyſters are more effectual than thoſe made of turpentine properly prepared. When all other injections are found ineffectual, recourſe is to be had to the injection of tobacco ſmoke; and, when even this fails, recourſe is to be had to the mechanical dilatation to be mentioned hereafter.

MCCCXCI.

MCCCXCI.

As glyſters often fail altogether in relieving this diſeaſe, and, even when they give ſome relief, they are often ſtill imperfect in producing a complete cure, it is generally proper, and often neceſſary, to attempt a more entire and certain cure, by purgatives given by the mouth. The more powerful of theſe, or, as they are called, the Draſtic Purgatives, may be ſometimes neceſſary, but their uſe is to be avoided, both becauſe they are apt to be rejected by vomiting, and becauſe, when they do not ſucceed in removing the obſtruction, they are ready to induce an inflammation. Upon this account it is uſual, and, indeed, proper, at leaſt in the firſt place, to employ the milder, and leſs inflammatory purgatives. None have ſucceeded with me better than the cryſtals of tartar,× becauſe this medicine may be con-

veniently

× I generally prescribe it mixed with syrup, & a tea Spoonful to be taken every quarter or half hour untill it operate properly. About ʒj of the Medicine may be taken for a dose in this Way.

veniently given in ſmall, but repeated, doſes, to a conſiderable quantity; and, under this management, it is the purgative leaſt ready to be rejected by vomiting, and much leſs ſo than the other neutral ſalts. If a ſtronger purgative be required, jalap, properly ×prepared, is leſs offenſive to the palate, and ſits better upon the ſtomach, than moſt other powerful purgatives. On many occaſions of colic, nothing is more effectually purgative than a large doſe of calomel.* Some practitioners have attempted to remove the obſtruction of the inteſtines by antimonial emetics exhibited in ſmall doſes, repeated at proper intervals; and when theſe doſes are not entirely rejected by vomiting, they often prove effectual purgatives.

When every purgative has failed, the action of the inteſtines has been effectually excited by throwing cold ϕwater on the lower extremities.

MCCCXCII.

× as rubbed & powdered along with Crem. Tart. in the form of Pv. Jalap. Comp.
* The French have given ʒi of it for a Dose. I have not exceeded gr x. If any inflammation be present, tis certainly a bad medicine.

MCCCXCII.

The *third* means of overcoming the ſpaſm of the inteſtines in this diſeaſe, is by employing a mechanical dilatation; and it has been frequently ſuppoſed that quickſilver, given in large quantity, might operate in this manner. I have not, however, found it ſucceſsful; and the theory of it is, with me, very doubtful. Some authors have mentioned the uſe of gold and ſilver pills, or balls, ſwallowed down; but I have no experience of ſuch practices, and I cannot ſuppoſe them a probable means of relief.

MCCCXCIII.

Another means of mechanical dilatation, and a more probable meaſure, is by injecting a large quantity of warm water by a proper ſyringe, which may throw it with

φ See the Medical Eſsays.

with ſome force, and in a continued ſtream, into the rectum. Both from the experiments reported by the late Mr De Haen, and from thoſe I myſelf have had occaſion to make, I judge this remedy to be one of the moſt powerful × and effectual.

MCCCXCIV.

I have now mentioned all the ſeveral means that may be employed for the cure of the colic, conſidered as a genus; but, before I quit this ſubject, it may be expected that I ſhould take notice of ſome of the ſpecies which may ſeem to require a particular conſideration. In this view, it may be expected that I ſhould eſpecially take notice of that ſpecies named the Colic of Poitou, and particularly known in England by the name of the Devonſhire Colic.

MCCCXCV.

× I have thrown in a Gallon of Water at one time & succeeded after every other Medicine had failed.

MCCCXCV.

This ſpecies of the diſeaſe is certainly a peculiar one, both in reſpect of its cauſe and its effects; but, as to the firſt, it has been lately ſo much the ſubject of inveſtigation, and is ſo well aſcertained by the learned phyſicians, Sir George Baker and Dr Hardy, that it is unneceſſary for me to ſay any thing of it here.

With reſpect to the cure of it, ſo far as it appears in the form of a colic, my want of the experience regarding it does not allow me to ſpeak with any confidence on the ſubject; but, ſo far as I can learn from others, it appears to me, that it is to be treated by all the ſeveral means that I have propoſed above for the cure of colic in general.

How far the peculiar effects of this diſeaſe are to be certainly foreſeen and obviated, I have not properly learned; and I muſt leave the matter to be determined by thoſe who have had ſufficient experience in it.

CHAP.

CHAP. X.

OF THE CHOLERA.

MCCCXCVI.

In this diſeaſe, a vomiting and purging concurring together, or frequently alternating with one another, are the chief ſymptoms. The matter rejected both upwards and downwards appears manifeſtly to conſiſt chiefly of bile.

MCCCXCVII.

From this laſt circumſtance, we conclude that the diſeaſe depends upon an increaſed ſecretion of bile, and its copious effuſion into the alimentary canal; in which, as it irritates and excites the motions above mentioned, we infer, that the bile thus effuſed in larger quantity is, at the ſame time, alſo of a more acrid quality. This appears likewiſe from the violent, and very painful, gripings that attend the diſeaſe, and which we can impute only to the violent ſpaſmodic contractions of the inteſtines that take place here. Theſe ſpaſms are commonly communicated to the abdominal muſcles, and very frequently to thoſe of the extremities.

MCCCXCVIII.

In the manner now deſcribed, the diſeaſe frequently proceeds with great violence till the ſtrength of the patient is greatly, and often ſuddenly, weakened, till a coldneſs of the extremities, cold ſweats, and faintings, ſhew this, and put an end to the patient's life, ſometimes in the courſe of one day.

In other caſes the diſeaſe is leſs violent, continues for a day or two, and then ceaſes by degrees; though ſuch recoveries ſeldom happen without the aſſiſtance of remedies.

MCCCXCIX.

This diſeaſe ſeldom comes on with any ſymptoms of pyrexia; and though, during the courſe of it, both the pulſe and reſpiration are hurried and irregular, theſe ſymptoms are generally ſo entirely removed by the remedies that quiet the ſpaſmodic affections peculiar to the diſeaſe, as to leave no ground for ſuppoſing that it had been accompanied by any proper pyrexia.

MCCCC.

This is a diſeaſe attending a very warm ſtate of the air; and, in very warm climates, it may, perhaps, appear at any time of the year; but, even in theſe climates, it is moſt frequent during their warmeſt ſeaſons; and, in temperate climates, appears only in the warm ſeaſons. Dr Sydenham conſidered the appearances of this diſeaſe in England to be confined to the month of Auguſt, but he himſelf obſerved it to appear ſometimes towards the end of ſummer, when the ſeaſon was unuſually warm, and that, in proportion to the heat, the violence of the diſeaſe was greater. Others have obſerved that it appeared more early in ſummer, and always ſooner or later, according as the great heats ſooner or later ſet in.

MCCCCI.

From all theſe circumſtances, it is, I think, very evident, that this diſeaſe is the effect of a warm atmoſphere, producing ſome change in the ſtate of the bile in the human body, and this change conſiſting either in its rendering the matter of the bile more acrid, ſo as thereby to ſtimulate a more copious ſecretion, or merely by diſpoſing the matter of the bile to paſs off in larger quantity, and, under that circumſtance, perhaps, neceſſarily more acrid.

MCCCCII.

It has been remarked, that, in warm climates, and ſeaſons, after extremely hot and dry weather, a fall of rain cooling the atmoſphere ſeems eſpecially to bring on this diſeaſe; and it is very probable that an obſtructed perſpiration may have alſo a ſhare in this, though it certainly happens that the diſeaſe does appear when no change in the temperature of the air, nor any application of cold, have been obſerved.

MCCCCIII.

It is poſſible, that, in ſome caſes, the heat of the ſeaſon may give only a prediſpoſition, and that the diſeaſe may be excited by certain ingeſta, or other cauſes; but it is equally certain that the diſeaſe has occurred without any previous change, or error, either in diet, or in manner of life, that could be obſerved.

MCCCCIV.

The Noſologiſts have conſtituted a Genus under the title of Cholera, and under this have arranged as ſpecies, every affection in which a vomiting and purging of any kind happened to concur. In many of theſe ſpecies, however, the matter evacuated is not bilious, and, though it were, the evacuation does not proceed from any cauſe in the ſtate of the atmoſphere.

In many caſes, too, the vomiting which occurs is not an eſſential, but merely an accidental ſymptom, from the particular violence of the diſeaſe. The appellation of Cholera, therefore, ſhould, in my opinion, be confined to the diſeaſe I have deſcribed above, which by its peculiar cauſe, and, perhaps, alſo by its ſymptoms, is very different from all the other ſpecies that have been aſſociated with it. I believe that all the other ſpecies arranged under the title of Cholera by *Sauvages* or *Sagar*, may be properly enough referred to the genus of Diarrhoea, which we are to treat of preſently.

The diſtinction I have endeavoured to eſtabliſh between the proper Cholera, and the other diſeaſes that have ſometimes got the ſame appellation, will, as I judge, ſuperſede the queſtion, Whether the Cholera, in temperate climates, happens at any other ſeaſon than that above aſſigned.

MCCCCV.

MCCCCV.

In the caſe of a genuine cholera, the cure of it has been long ago eſtabliſhed by experience.

In the beginning of the diſeaſe, the evacuation of the redundant bile is to be favoured by the plentiful exhibition of mild diluents, both given by the mouth, and injected by the anus; and all evacuant medicines, employed in either way, are not only ſuperfluous, but commonly hurtful.

MCCCCVI.

When the redundant bile appears to be ſufficiently waſhed out, and even before that, if the ſpaſmodic affections of the alimentary canal become very violent, and are communicated in a conſiderable degree to other parts of the body, or when a dangerous debility ſeems to be induced, the irritation is to be immediately obviated by opiates, in ſufficiently large doſes, but in ſmall bulk, and given either by the mouth or by glyſter.

MCCCCVII.

Though the patient be in this manner relieved, it frequently happens, that, when the operation of the opium is over, the diſeaſe ſhows a tendency to return; and, for at leaſt ſome days after the firſt attack, the irritability of the inteſtines, and their diſpoſition to fall into painful ſpaſmodic contractions, ſeem to continue. In this ſituation, the repetition of the opiates, for perhaps ſeveral days, may come to be neceſſary; and, as the debility commonly induced by the diſeaſe favours the diſpoſition to ſpaſmodic affections, it is often uſeful and neceſſary, together with the opiates, to employ the tonic powers of the Peruvian bark.

CHAP. XI.

OF DIARRHOEA,

OR

LOOSENESS.

MCCCCVIII.

This diſeaſe conſiſts in evacuations by ſtool, more frequent, and of more liquid matter, than uſual. This leading and characteriſtic ſymptom is ſo diverſified in its degree, in its cauſes, and in the variety of matter evacuated, that it is almoſt impoſſible to give any general hiſtory of the diſeaſe.

MCCCCIX.

It is to be diſtinguiſhed from dyſentery by not being contagious, by being generally without fever, and by being with the evacuation of the natural excrements, which are, at leaſt for ſome time, retained in dyſentery. The two diſeaſes have been commonly diſtinguiſhed by the gripings being more violent in the dyſentery; and they are commonly leſs violent and leſs frequent in diarrhoea; but as they frequently do occur in this alſo, and ſometimes to a conſiderable degree, ſo they do not afford any proper diſtinction.

MCCCCX.

A diarrhoea is to be diſtinguiſhed from Cholera, chiefly by the difference of their cauſes, which, in cholera, is of one peculiar kind, but, in diarrhoea, is prodigiouſly diverſified, as we ſhall ſee preſently. It has been common to diſtinguiſh cholera, by the purging of bilious matter, in this, being always accompanied with a vomiting of the ſame kind; but it does not univerſally apply, as a diarrhoea is ſometimes attended with vomiting, and even of bilious matter.

MCCCCXI.

The diſeaſe of diarrhoea, thus diſtinguiſhed, is very greatly diverſified; but, in all caſes, the frequency of ſtools is to be imputed to a preternatural increaſe of the periſtaltic motion, in the whole, or at leaſt, a conſiderable portion of the inteſtinal canal. This increaſed action is in different degrees, is often convulſive and ſpaſmodic, and, at any rate, is a *motus abnormis;* for which reaſon, in the Methodical Noſology, I have referred it to the order of *Spaſmi*, *mi*, and, accordingly, treat of it in this place.

MCCCCXII.

Upon the ſame ground, as I conſider, the diſeaſe named Lientery to be the higheſt degree of an increaſed periſtaltic motion, I have conſidered it as merely a ſpecies of diarrhoea. The idea of a laxity of the inteſtinal canal being the cauſe either of lientery, or other ſpecies of diarrhoea, appears to me to be without foundation, except in the ſingle caſe of frequent liquid ſtools from a palſy of the *ſphincter ani.*

MCCCCXIII.

The increaſed action of the periſtaltic motion, I conſider, as always the chief part of the proximate cauſe of diarrhoea; but the diſeaſe is further, and, indeed, chiefly diverſified by the different cauſes of this increaſed action, which we are now to inquire into.

MCCCCXIV.

The ſeveral cauſes of the increaſed action of the inteſtines may be referred, I think, in the firſt place, to two general heads.

The *firſt* is, of the diſeaſes of certain parts of the body, which, either from a conſent of the inteſtines with theſe parts, or from the relation which the inteſtines have to the whole ſyſtem, occaſion an increaſed action in the inteſtines, without the transference of any ſtimulant matter from the primary diſeaſed part to them.

The *ſecond* head of the cauſes of the increaſed action of the inteſtines is, of the ſtimuli of various kinds, which are applied directly to the inteſtines themſelves.

MCCCCXV.

That affections of other parts of the ſyſtem may affect the inteſtines without the transference of any ſtimulant matter, we learn from hence, that the paſſions of the mind do in ſome perſons excite diarrhoea.

MCCCCXVI.

That diſeaſes in other parts may, in like manner affect the inteſtines, appears from the dentition of infants, frequently exciting diarrhoea. I believe that the gout often affords another inſtance of the ſame kind; and, probably, there are others, though not well aſcertained.

MCCCCXVII.

The ſtimuli (MCCCCXIV.) which may be applied to the inteſtines are of very various kinds, and are either, 1. Matters immediately introduced by the mouth; or, 2. Matters poured into the inteſtines by the ſeveral excretories opening into them; or, 3. Matters poured from certain preternatural openings made into them in certain diſeaſes.

MCCCCXVIII.

Of thoſe (MCCCCXVII.) introduced by the mouth, the firſt to be mentioned are the aliments commonly taken in. Theſe being taken in in too great quantity, often prevent their due digeſtion in the ſtomach, and being thus ſent in their crude, and, probably, acrid ſtate, to the inteſtines, they frequently excite diarrhoea.

The ſame aliments, though, in proper quantity, yet having too great a proportion, as is often the caſe, of ſaline or ſaccharine matter along with them, prove ſtimulant to the inteſtines, and excite diarrhoea.

But our aliments prove eſpecially the cauſes of diarrhoea, according as they, from their own nature, or from the weakneſs of the ſtomach, are diſpoſed to undergo an undue degree of fermentation there, and thereby become ſtimulant to the inteſtines. Thus, aceſcent aliments are ready to produce diarrhoea; but whether from their having any directly purgative quality, or only as mixed in an over proportion with the bile, is not well determined.

MCCCCXIX.

Not only the aceſcent, but the putreſcent diſpoſition of the aliments, is a cauſe of diarrhoea; and it appears, that even the effluvia of putrid bodies, taken in, any how in large quantity, have the ſame effect.

Are oils or fats, taken in as a part of our aliments, ever the cauſe of diarrhoea; and, if they be, in what manner do they operate?

MCCCCXX.

The other matters introduced by the mouth, which may be cauſes of diarrhoea, are thoſe thrown in either as medicines, or poiſons that have the faculty of ſtimulating the alimentary canal. Thus, in the liſt of the Materia Medica, we have a long catalogue of thoſe named purgatives; and in the liſt of poiſons, we have many poſſeſſed of the ſame quality. The former, given in a certain quantity, occaſion a temporary diarrhoea, and, given in very large doſes, may occaſion it in exceſs, and continue it longer than uſual, producing that ſpecies of diarrhoea named a *Hypercatharſis.*

MCCCCXXI.

MCCCCXXI.

The matters (MCCCCXVII. 2.) poured into the cavity of the inteſtines, from the excretories opening into them, and which may occaſion diarrhoea, are either thoſe from the pancreatic or biliary duct, or thoſe from the excretories in the coats of the inteſtines themſelves.

MCCCCXXII.

What changes may happen in the pancreatic juice I do not exactly know, but I conceive them poſſible, and that an acrid fluid may iſſue from the pancreas, even while ſtill entire in its ſtructure; but more eſpecially when it is in a ſuppurated, ſchirrous, or cancerous ſtate, a very acrid matter may be poured out, and occaſion diarrhoea.

MCCCCXXIII.

We know well, that, from the biliary ducts, the bile may be poured out in greater quantity than uſual; and there is little doubt of its being alſo ſometimes poured out of a more than ordinary acrid quality. It is very probable, that, in both ways, the bile is frequently a cauſe of diarrhoea.

Though I have ſaid above that diarrhoea may be commonly diſtinguiſhed from cholera, I muſt admit here, that, as the cauſes producing that ſtate of the bile which occaſions cholera, may occur in all the different poſſible degrees of force, ſo as, on one occaſion, to produce the moſt violent, and diſtinctly marked cholera, but, upon another, to produce only the gentleſt diarrhoea, which, however, will be the ſame diſeaſe, only varrying in degree; ſo I think it probable, that, in warm climates, and in warm ſeaſons, a diarrhoea *blioſa* of this kind may frequently occur, not to be always certainly diſtinguiſhed from cholera.

However this may be, it is ſufficiently probable, that, in ſome caſes, the bile, without having been acted upon by the heat of the climate or ſeaſon, may be redundant and acrid, and be thereby a particular cauſe of diarrhoea.

MCCCCXXIV.

Beſide bile from the ſeveral cauſes, and in the conditions mentioned, the biliary duct may pour out pus, or other matter, from abſceſſes in the liver, which may be the cauſe of diarrhoea.

Practical writers take notice of a diarrhoea wherein a thin and bloody liquid is diſcharged, which they ſuppoſe to have proceeded from the liver, and have therefore given the diſeaſe the name of *Hepatirrhoea;* but we have not met with any inſtance of this kind, and, therefore, cannot properly ſay any thing concerning it.

MCCCCXXV.

A ſecond ſet of excretories, from which matter is poured into the cavity of the inteſtines, are thoſe from the coats of the inteſtines themſelves, and are either the exhalants proceeding directly from the extremities of arteries, or the excretories from the mucous follicles; and both theſe ſources occur in prodigious number over the internal ſurface of the whole inteſtinal canal. It is probable that it is chiefly the effuſion from theſe ſources, which, in moſt inſtances, gives the matter of the liquid ſtools occurring in diarrhoea.

MCCCCXXVI.

The matter from both ſources may be poured out in larger quantity than uſual, merely by the increaſed action of the inteſtines,

teſtines, whether that be excited by the paſſions of the mind (MCCCCXV.), by diſeaſes in other parts of the ſyſtem (MCCCCXVI.), or by the various ſtimulants mentioned (MCCCCXVIII. and following), or the quantity of matter poured out may be increaſed, not ſo much by the increaſed action of the inteſtines, as by an increaſed afflux of fluids from other parts of the ſyſtem.

Thus, cold applied to the ſurface of the body, and ſuppreſſing perſpiration, may determine a greater quantity of fluids to the inteſtines.

Thus, the urine in the *iſchuria renalis* is ſometimes determined to paſs off again by the inteſtines.

In like manner, pus or ſerum may be abſorbed from the cavities in which they have been ſtagnant, and be again poured out into the inteſtines, as often happens, in particular with reſpect to the water of dropſies.

MCCCCXXVII.

It is here to be obſerved that a diarrhoea may be excited not only by a copious afflux of fluids from other parts of the ſyſtem, but likewiſe by the mere determination of various acrid matters from the maſs of blood into the cavity of the inteſtines. Thus it is ſuppoſed that the morbific matter of fevers is ſometimes thrown out into the cavity of the inteſtines, and gives a critical diarrhoea; and, whether I do or do not admit the doctrine of critical evacuations, I muſt acknowledge that the morbific matter of the exanthemata is frequently thrown upon the inteſtines, and occaſions diarrhoea.

MCCCCXXVIII.

It is to me further probable, that the putreſcent matter diffuſed over the maſs of blood in putrid diſeaſes, is frequently poured out by the exhalants into the inteſtines, and proves there the cauſe, at leaſt in part, of the diarrhoea ſo commonly attending theſe diſeaſes.

MCCCCXXIX.

Upon this ſubject, of the matters poured into the cavity of the inteſtines, I have chiefly conſidered them as poured out in unuſual quantity; but it is probable, that, for the moſt part, they are alſo changed in their quality, and become of a more acrid and ſtimulant nature; upon which account eſpecially it is, that they excite, or at leaſt increaſe, a diarrhoea.

MCCCCXXX.

How far, and in what manner, the exhalant fluid may be changed in its nature and quality, we do not certainly know; but, with reſpect to the fluid from the mucous excretories, we know, that, when poured out in unuſual quantity, it is commonly, at the ſame time, in a more liquid and acrid form, and may prove, therefore, conſiderably irritating.

MCCCCXXXI.

Though the copious effuſion of a more liquid and acrid matter, from the mucous excretories, be probably owing to the matter being poured out immediately as it is ſecreted from the blood into the mucous follicles, without being allowed to ſtagnate in the latter, ſo as to acquire that milder quality, and thicker conſiſtence, we commonly find in the mucus in its natural ſtate; and, although we might ſuppoſe that the excretions of a thin and acrid fluid ſhould always be the effect of every determination to the mucous follicles, and of every ſtimulant applied to them, yet true it is, that the reverſe is ſometimes the caſe, and that, from the mucous follicles, there is frequently an increaſed excretion of a mucus, which appears, in its proper form, of a mild, viſcid, and thickiſh matter. This commonly occurs in the caſe of dyſentery; and it has been obſerved to give a ſpecies of diarrhoea, which has been properly named the *Diarrhoea Mucoſa*.

MCCCCXXXII.

A third ſource of matter poured into the cavity of the inteſtines, and occaſioning diarrhoea (MCCCCXVII. 3.), is from theſe preternatural openings produced by diſeaſes, in the inteſtines, or neighbouring parts. Thus the blood-veſſels on the internal ſurface of the inteſtines may be opened by eroſion, rupture, or anaſtomoſis, and pour into the cavity their blood, which, either by its quantity, or by its acrimony, whether inherent, or acquired by ſtagnation, may ſometimes give a diarrhoea evacuating bloody matter. This is what I think happens in that which has been called the *Melena*, or *Morbus Niger*.

MCCCCXXXIII.

Another preternatural ſource of matter poured into the cavity of the inteſtines, is the opening of abſceſſes, ſeated either in the coats of the inteſtines themſelves, or in any of the contiguous viſcera, which, during an inflamed ſtate, had formed an adheſion with ſome part of the inteſtines. The matter thus poured into their cavity may be various, purulent or ſanious, or both together, mixed at the ſame time with more or leſs of blood, and in each of theſe ſtates may be a cauſe of diarrhoea.

MCCCCXXXIV.

Amongſt the ſtimuli that may be directly applied to the inteſtines, and which, by increaſing their periſtaltic motion, may occaſion diarrhoea, we muſt not omit to mention worms, as having frequently that effect.

MCCCCXXXV.

We muſt alſo mention here a ſtate of the inteſtines, wherein their periſtaltic motion is preternaturally increaſed, and a diarrhoea produced; and that is, when they are affected with an eryſipelatous inflammation. With reſpect to the exiſtence of ſuch a ſtate, and its occaſioning diarrhoea, ſee what is ſaid above in (CCCLXXXVIII. and following.) Whether it is to be conſidered as a particular and diſtinct caſe of diarrhoea, or is always the ſame with ſome of theſe produced by one or other of the cauſes above mentioned, I have not been able to determine.

MCCCCXXXVI.

Laſtly, by an accumulation of alimentary, or other matter, poured into the cavity of the inteſtines from ſeveral of the ſources above mentioned, a diarrhoea may be eſpecially occaſioned when the abſorption of the lacteals, or of other abſorbents, is prevented, either by an obſtruction of their orifices, or by an obſtruction of the meſenteric glands, through which alone the abſorbed fluids can be tranſmitted.

In one inſtance of this kind, when the chyle prepared in the ſtomach and duodenum is not abſorbed in the courſe of the inteſtines, but paſſes off in conſiderable quantity by the anus, the diſeaſe has been named the *Morbus Coeliacus*, or ſimply, and more properly, *Coeliaca*, which, accordingly, I have conſidered as a ſpecies of diarrhoea.

MCCCCXXXVII.

I have thus endeavoured to point out the various ſpecies of diſeaſe that may come under the general appellation of diarrhoea; and from that enumeration it will appear, that many, and, indeed, the greater part of the caſes of diarrhoea, are to be conſidered as ſympathic affections, and to be cured only by curing the primary diſeaſe upon which they depend; of which, however, I cannot properly treat here. From our enumeration, it will alſo appear, that many of the caſes of diarrhoea, which may be conſidered as idiopathic, will not require my ſaying much of them here. In many inſtances, the diſeaſe is aſcertained, and alſo the cauſe aſſigned, by the condition of the matter evacuated, ſo that what is neceſſary to correct or remove it will be ſufficiently obvious to practitioners of any knowledge. In ſhort, I do not find that I can offer any general plan for the cure of diarrhoea; ſo that all I can propoſe on this ſubject, is to give ſome general remarks on the practice that has been commonly followed in the cure of this diſeaſe.

MCCCCXXXVIII.

The practice in this diſeaſe has chiefly proceeded upon the ſuppoſition of an acrimony in the fluids, or of a laxity in the ſimple and moving fibres of the inteſtines; and the remedies employed have accordingly been correctors of particular acrimony, general demulcents, evacuants by vomiting or purging, aſtringents, or opiates. Upon each of theſe kinds of remedy I ſhall now offer ſome remarks.

MCCCCXXXIX.

An acid acrimony is, upon ſeveral occaſions, the cauſe of diarrhoea, particularly in children, and, in ſuch caſes, the abſorbent earths have been very properly employed. Their common, however, and promiſcuous uſe has been very injudicious; and where there is any putreſcency they muſt be hurtful.

MCCCCXL.

The caſes in which there is a putrid or putreſcent acrimony have, I think, been too ſeldom taken notice of, and, therefore, the uſe of acids too ſeldom admitted. The acrimony to be ſuſpected in bilious caſes, is probably of the putreſcent kind.

MCCCCXLI.

The general correctors of acrimony are the mild diluents and demulcents. The former have not been ſo much employed in diarrhoea as they ought; for, joined with demulcents, they very much increaſe the effects of the latter; and although the the demulcents, both mucilaginous and oily, may by themſelves be uſeful, yet, without the aſſiſtance of diluents, they can hardly be introduced in ſuch quantity as to anſwer the purpoſe.

MCCCCXLII.

As indigeſtion, and crudities preſent in the ſtomach, are ſo often the cauſe of diarrhoea, vomiting muſt therefore be frequently very uſeful in this diſeaſe.

In like manner, when the diſeaſe proceeds, as it often does, from obſtructed perſpiration, and an increaſed afflux of fluids to the inteſtines, vomiting is perhaps the moſt effectual means of reſtoring the determination of the fluids to the ſurface of the body.

It is poſſible that vomiting may give ſome inverſion of the periſtaltic motion, which is determined too much downwards in diarrhoea; ſo that, upon the whole, it is a remedy which may be very generally uſeful in this diſeaſe.

MCCCCXLIII.

Purging has been ſuppoſed to be more univerſally neceſſary, and has been more generally practiſed. This, however, in my opinion, proceeds, upon very miſtaken notions of the diſeaſe; and ſuch a practice ſeems to me, for the moſt part, ſuperfluous, and in many caſes very hurtful. It goes upon the ſuppoſition of an acrimony preſent in the inteſtines, to be carried out by purging; but, if that acrimony has either been introduced by the mouth, or brought into the inteſtines from other parts of the body, purging can neither be a means of correcting nor of exhauſting it, and muſt rather have the effect of increaſing its afflux, and of aggravating its effects. From whatever ſource the acrimony which can excite a diarrhoea proceeds, it may be ſuppoſed ſufficient to evacuate itſelf, ſo far as that can be done, by purging; and as in cholera, ſo, in the ſame kind of diarrhoea, it will be more proper to aſſiſt the evacuation by diluents and demulcents, than to increaſe the irritation by purgatives.

MCCCCXLIV.

If then, the uſe of purgatives, in diarrhoea, may be conſidered, even in the caſe of an acrimony preſent, as ſuperfluous, there are many other caſes in which they may be extremely hurtful. If the irritability of the inteſtines ſhall, from affections in other parts of the ſyſtem, or other cauſes, have been already very much increaſed, purgatives muſt neceſſarily aggravate the diſeaſe. In the caſe of lientery, no body thinks of giving a purgative; and in many caſes of diarrhoea approaching to that, they muſt be equally improper. I have already obſerved, that, when diarrhoea proceeds from an afflux of fluids to the inteſtines, whether in too great quantity, or of an acrid quality, purgatives may be hurtful; and whoever, therefore, conſiders the numerous and various ſources from which acrid matter may be poured into the cavity of the inteſtines, will readily perceive, that, in many caſes of diarrhoea, purgatives may be extremely pernicious.

There is one caſe in particular to be taken notice of. When, from a general and acrid diſſolution of the blood, the ſerous fluids run off too copiouſly into the cavity of the inteſtines, and excite that diarrhoea which attends the advanced ſtate of hectic fever, and is properly called a

Colliquative Diarrhoea. I have, in ſuch caſes, often ſeen purgatives given with the moſt baneful effects.

There is ſtill another caſe of diarrhoea in which purgatives are pernicious, and that is, when the diſeaſe depends, as we have alledged it ſometimes may, upon an eryſipelatous inflammation of the inteſtines.

I need hardly add, that, if there be a caſe of diarrhoea depending upon a laxity of the ſolids, purgatives cannot there be of any ſervice, and may do very much harm. Upon the whole, it will, I think, appear, that the proper uſe of purgatives in diarrhoea is very much limited, and that the promiſcuous uſe of them, which has been ſo common, is injudicious, and often pernicious. I believe the practice has been chiefly owing to the uſe of purgatives in dyſenteric caſes, in which they are truly uſeful, becauſe, contrary to the caſe of diarrhoea, there is in dyſentery a conſiderable conſtriction of the inteſtines.

MCCCCXLV.

Another ſet of remedies employed in diarrhoea, are aſtringents. There has been ſome heſitation about the employment of theſe in recent caſes, upon the ſuppoſition that they might occaſion the retention of an acrid matter that ſhould be thrown out. I cannot, however, well underſtand, or aſſign the caſes in which ſuch caution is neceſſary; and I think that the power of aſtringents is ſeldom ſo great as to render their uſe very dangerous. The only difficulty which has occurred to me, with reſpect to their uſe, has been to judge of the circumſtances to which they are eſpecially adapted. It appears to me to be only in theſe where the irritability of the inteſtines depends upon a loſs of tone; and this, I think, may occur either from the debility of the whole ſyſtem, or from cauſes acting on the inteſtines alone, all violent, or long continued ſpaſmodic and convulſive affections of the inteſtinal canal, neceſſarily inducing a debility there. Such cauſes often take place, from violent irritation, in colic, dyſentery, cholera, and diarrhoea.

MCCCCXLVI.

The laſt of the remedies of diarrhoea that remain to be mentioned are opiates. The ſame objections have been made to the uſe of theſe, in recent caſes of diarrhoea, as to that of aſtringents, but on no good grounds; for the effects of opiates, as aſtringent, are never very permanent, and an evacuation depending upon irritation, though it may be for ſome time ſuſpended by opiates, yet always returns very ſoon. It is only by taking off irritability that opiates are uſeful in diarrhoea; and, therefore, when the diſeaſe depends upon an increaſe of irritability alone, or when, though proceeding from irritation, that irritation is corrected or exhauſted, opiates are the moſt uſeful and certain remedy. And, though opiates are not ſuited to correct or remove an irritation applied, they are often of great benefit in ſuſpending the effects of that irritation whenever theſe are violent; ſo, upon the whole, it will appear, that opiates may be very frequently, and with great propriety, employed in the cure of diarrhoea.

C H A P. XII.

OF THE DIABETES.

MCCCCXLVII.

This diſeaſe conſiſts in the voiding of an unuſually large quantity of urine.

As hardly any ſecretion can be increaſed without an increaſed action of the veſſels concerned in it, and as ſome inſtances of this diſeaſe are attended with affections manifeſtly ſpaſmodic, I have had no doubt of arranging the diabetes under the order of *Spaſmi*.

MCCCCXLVIII.

MCCCCXLVIII.

This diſeaſe is always accompanied with a great degree of thirſt, and, therefore, with the taking in of a great quantity of drink. This, in ſome meaſure, accounts for the very extraordinary quantities of urine voided; but ſtill, independent of this, a peculiar diſeaſe certainly takes place, as the quantity of urine voided does almoſt always exceed the whole of the liquids taken in.

MCCCCXLIX.

The urine voided in this diſeaſe is always very clear, and, at firſt ſight, appears entirely without any colour, but, viewed in a certain light, it generally appears to be ſlightly tinged with a yellowiſh green, and, in this reſpect, has been very properly compared to a ſolution of honey in a large proportion of water.

Examined by the taſte, it is very generally found to be more or leſs ſweet; and many experiments that have now been made in different inſtances of the diſeaſe, ſhow clearly that ſuch urine contains, in conſiderable quantity, a ſaccharine matter, and which appears to be very exactly of the nature of common ſugar.

MCCCCL.

Doctor Willis ſeems to me to have been the firſt who took notice of the ſweetneſs of the urine in diabetes, and almoſt every phyſician of England ſince has taken notice of the ſame. It is to be doubted, indeed, if there is any caſe of idiopathic diabetes in which the urine is of a different kind. Tho' neither the antients nor, in the other countries of Europe, the moderns, till the latter were directed to it by the Engliſh, have taken notice of the ſweetneſs of the urine, it does not perſuade us, that, either in antient or in modern times, the urine in diabetes was of another kind. I myſelf, indeed, think I have met with one inſtance of diabetes in which the urine was perfectly inſipid; and it would ſeem that a like obſervation had occurred to Dr Martin Liſter. I am, perſuaded, however, that ſuch inſtances are very rare, and that the other is by much the more common, and, perhaps, the almoſt univerſal. I judge, therefore, that the preſence of ſuch a ſaccharine matter may be conſidered as the principal circumſtance in idiopathic diabetes; and it gives, at leaſt, the only caſe of that diſeaſe that I can properly treat of here; for I am only certain, that what I am further to mention relates to ſuch a caſe.

MCCCCLI.

The antecedents of this diſeaſe, and, conſequently, the remote cauſes of it, have not been well aſcertained. It may be true that it frequently happens to men, who, for a long time before, had been intemperate in drinking; that it happens to perſons of a broken conſtitution, or who, as we often expreſs it, are in a cachectic ſtate; that it ſometimes follows intermittent fevers; and that it has often occurred from exceſs in the drinking of mineral waters; but none of theſe cauſes apply very generally to the caſes that occur. They are not always, nor even frequently, followed by a diabetes; and there are many inſtances of diabetes which could not be referred to any of them. In moſt of the caſes of this diſeaſe which I have met with, I could not refer it to any particular cauſe.

MCCCCLII.

This diſeaſe commonly comes on ſlowly, and almoſt imperceptibly, without any previous diſorder. It often ariſes to a conſiderable degree, and ſubſiſts long, without being accompanied with evident diſorder in any particular part of the ſyſtem. The great thirſt which always, and the voracious appetite which frequently occur in it, are often the only remarkable ſymptoms. Under the continuance of the diſeaſe, the body is often greatly emaciated; and a great weakneſs alſo prevails. The pulſe is commonly frequent; and an obſcure fever is, for the moſt part, preſent. When the diſeaſe proves fatal, it generally ends with a fever, in many circumſtances, particularly thoſe of emaciation and debility, reſembling a hectic.

MCCCCLIII.

The proximate cauſe of this diſeaſe is not certainly or clearly known. It ſeems to have been ſometimes connected with calculous affections of the kidneys; and it is poſſible, that an irritation applied there, may increaſe the ſecretion of urine. It perhaps often does ſo; but how it ſhould produce the ſingular change that takes place in the ſtate of the urine, is not to be eaſily explained. It certainly often happens, that calculous matters are long preſent in the urinary paſſages, without having any ſuch effect as that of producing diabetes in any ſhape.

Some have ſuppoſed that the diſeaſe occurs from a relaxed ſtate of the ſecretory veſſels of the kidneys; and, indeed, the diſſections of perſons who had died of this diſeaſe have ſhown the kidneys in a very flaccid ſtate. This, however, is probably to be conſidered as rather the effect, than the cauſe of the diſeaſe.

That no topical affection of the kidneys has a ſhare in producing this diſeaſe, and that a fault in the aſſimilation of the fluids is rather to be blamed, I conclude from hence, that even the ſolid food taken in, increaſes the quantity of the urine voided, at the ſame time, with an increaſe of the ſaccharine matter above mentioned.

MCCCCLIV.

The diabetes has been ſuppoſed to be owing to a certain ſtate of the bile; and it is true, that this diſeaſe has ſometimes occurred in perſons who were, at the ſame time, affected with diſeaſes of the liver; but this concurrence does not often take place; and the diabetes frequently occurs, ſeparately from any affection of the liver. In twenty inſtances of diabetes which I have ſeen, there was not, in any one of them, any evident affection of the liver.

The explanation that has been offered of the nature and operation of the bile, in producing diabetes, is very hypothetical, and nowiſe ſatisfying.

MCCCCLV.

As I have already ſaid, I think it probable, that, in moſt caſes, the proximate cauſe of this diſeaſe is ſome fault in the aſſimilatory powers, or in thoſe employed in converting alimentary matters into the proper animal fluids. This I formerly hinted to Dr Dobſon, and it has been proſecuted and publiſhed by him; but I muſt own, that it is a theory embarraſſed with ſome difficulties, which I cannot at preſent very well remove.

MCCCCLVI.

The proximate cauſe of diabetes being ſo little known or aſcertained, I cannot propoſe any rational method of cure in the diſeaſe. From the teſtimony of ſeveral authors, I believe that the diſeaſe has been cured; but I believe alſo, that this has ſeldom happened ; and when it has been cured, I doubt much if it was effected by the ſeveral remedies, to which theſe cures have been aſcribed. In all the inſtances of this diſeaſe which I myſelf have ſeen, and in ſeveral others of which I have been informed, no cure of it has ever been made in Scotland, though many inſtances of it have occurred, and in moſt of them, the remedies recommended by authors have been diligently employed. I cannot, therefore, with any advantage, enter into a detail of theſe remedies ; and, as the diſeaſe, together with its ſeveral circumſtances, are likely to become ſoon the ſubject of diligent inveſtigation, I avoid going farther at preſent, and judge it prudent to ſuſpend my opinion, till I ſhall have more obſervations and experiments upon which I can found.

CHAP. XIII.

OF HYSTERIA,

OR THE

HYSTERIC DISEASE.

MCCCCLVII.

The many and various ſymptoms which have been ſuppoſed to belong to a diſeaſe under this appellation, render it extremely difficult to give a general character or definition of it. It is, however, proper, in all caſes, to attempt ſome general idea; and, therefore, by taking the moſt common form, and that concurrence of ſymptoms by which it is principally diſtinguiſhed, I have formed a character in my ſyſtem of Methodical Noſology, and ſhall here endeavour to illuſtrate it, by giving a more full hiſtory of the phaenomena.

MCCCCLVIII.

The diſeaſe attacks in paroxyſms or fits. Theſe commonly begin by ſome pain and fulneſs felt in the left ſide of the belly. From this a ball ſeems to move, with a grumbling noiſe, into the other parts of the belly, and making, as it were, various convolutions there, ſeems to move into the ſtomach, and more diſtinctly ſtill riſes up to the top of the gullet, where it remains for ſome time, and, by its preſſure upon the larynx, gives a ſenſe of ſuffocation. By the time that the diſeaſe has proceeded thus far, the patient is affected with a ſtupor and inſenſibility, while, at the ſame time, the body is agitated with various convulſions. The trunk of the body is wreathed to and fro, and the limbs are variouſly agitated; commonly the convulſive motion of one arm and hand, is that of beating, with the cloſed fiſt, upon the breaſt very violently and repeatedly. This ſtate continues for ſome time, and has, in that period, ſome remiſſions and renewals of the convulſive motions; but they at length ceaſe, leaving the patient in a ſtupid, and ſeemingly ſleeping ſtate. More or leſs ſuddenly, and frequently with repeated ſighing and ſobbing, together with a murmuring noiſe in the belly, the patient comes out of this, and returns to the exerciſe of ſenſe and motion, but, generally, without any recollection of the ſeveral circumſtances we have here deſcribed.

MCCCCLIX.

This is the form of what is called an *hyſteric paroxyſm*, and is the moſt common form; but its paroxyſms are conſiderably varied in different perſons, and even in the ſame perſon at different times. It differs, by having more or fewer of the circumſtances above mentioned; by theſe circumſtances being more or leſs violent; and by the different duration of the whole fit.

Before the fit, there is ſometimes a ſudden, and unuſually large flow of limpid urine. At the coming on of the fit, the ſtomach is ſometimes affected with vomiting, the lungs with conſiderable difficulty of breathing, and the heart with palpitations. During the fit, the whole of the belly, and particularly the navel, is drawn ſtrongly inwards; the *ſphincter ani* is ſometimes ſo firmly conſtricted as not to admit a ſmall glyſter pipe; and there is, at the ſame time, an entire ſuppreſſion of urine. Such fits are, from time to time, ready to recur; and, during the intervals, the patients are liable to involuntary motions, to fits of laughing, and crying, with ſudden tranſitions from the one to the other, while ſometimes falſe imaginations, and ſome degree of delirium, alſo occur.

MCCCCLX.

Theſe affections have been ſuppoſed peculiar to the female ſex; and, indeed, they moſt commonly appear in females; but they ſometimes, though rarely, attack alſo the male ſex; never, however, that I have obſerved, in the ſame exquiſite degree.

In the female ſex, the diſeaſe occurs, eſpecially from the age of puberty to that of thirty-five years, and though it does ſometimes, yet very ſeldom appears before the former, or after the latter of theſe periods.

At all ages, the time at which it moſt readily occurs is that of the menſtrual period.

The diſeaſe affects the females of the moſt exquiſitely ſanguine and plethoric habits,

bits, and frequently affects thoſe of the moſt robuſt and maſculine conſtitutions.

It affects the barren more than the breeding women, and therefore frequently young widows.

It occurs eſpecially in thoſe females who are liable to the Nymphomania; and the Noſologiſts have, properly enough, marked one of the varieties of this diſeaſe, by the title of *Hyſteria Libidinoſa*.

In the perſons liable to the fits of this diſeaſe, it is readily excited by the paſſions of the mind, and by every conſiderable emotion, eſpecially thoſe brought on by ſurpriſe.

The perſons liable to this diſeaſe acquire often ſuch a degree of ſenſibility as to be ſtrongly affected by every impreſſion that comes upon them by ſurpriſe.

MCCCCLXI.

In this hiſtory, there appears to be a concurrence of ſymptoms and circumſtances, properly marking a very particular diſeaſe, which I think may be diſtinguiſhed from all others. It ſeems to me to have been improperly conſidered by phyſicians as the ſame with ſome other diſeaſes, and particularly with hypochondriaſis. The two diſeaſes may have ſome ſymptoms in common, but, for the moſt part, are conſiderably different.

Spaſmodic affections occur in both diſeaſes, but neither ſo frequently, nor to ſo great a degree, in hypochondriaſis as in hyſteria.

Perſons liable to hyſteria are ſometimes affected at the ſame time with dyſpepſia. They are often, however, entirely free from it; but I believe this never happens to perſons affected with hypochondriaſis.

Theſe different circumſtances mark ſome difference in the two diſeaſes; but they are ſtill more certainly diſtinguiſhed by the temperament they attack, and by the time of life at which they appear to be moſt exquiſitely formed.

It has been generally ſuppoſed, that the two diſeaſes differ only in reſpect of their appearing in different ſexes; but this is not well founded; for, although the hyſteria appears moſt commonly in females, the male ſex are not abſolutely excluded, as we have obſerved above; and, although the hypochondriaſis may be moſt frequent in men, the inſtances of it in the female ſex are very common.

MCCCCLXII.

From all theſe conſiderations, it muſt, I think, appear, that the hyſteria may be very well, and properly, diſtinguiſhed from hypochondriaſis.

Further, it ſeems to me to have been with great impropriety, that almoſt every degree of the irregular motions of the nervous ſyſtem has been referred to the one or other of theſe two diſeaſes. Both are marked by a peculiarity of temperament, as well as by certain ſymptoms commonly accompanying that; but ſome of theſe, and many others uſually marked by the name of Nervous Symptoms, may, from various cauſes, ariſe in temperaments different from that which is peculiar to either hyſteria or hypochondriaſis, and without being joined with the peculiar ſymptoms of either the one or the other diſeaſe; ſo that the appellation of Hyſteric and Hypochondriac are very inaccurately applied to them. Under what view theſe ſymptoms are otherwiſe to be conſidered, I am not ready to determine, but muſt remark, that the appellation of Nervous Diſeaſes, is too vague and undefined to be of any uſeful application.

MCCCCLXIII.

MCCCCLXIII.

Having thus endeavoured to diſtinguiſh hyſteria from every other diſeaſe, I ſhall now attempt its peculiar pathology. With reſpect to this, I think it will, in the firſt place, be obvious, that its paroxyſms begin by a convulſive and ſpaſmodic affection of the alimentary canal, which is afterwards communicated to the brain, and to a great part of the nervous ſyſtem. Although the diſeaſe appears to begin in the alimentary canal, yet the connection which the paroxyſms ſo often have with the menſtrual flux, and with the diſeaſes that depend on the ſtate of the genitals, ſhows, that phyſicians have, at all times, judged rightly in conſidering this diſeaſe as an affection of the uterus, and other parts of the genital ſyſtem.

MCCCCLXIV.

With regard to this, however, I can go no farther. In what manner the uterus, and in particular the ovaria, are affected in this diſeaſe; how the affection of theſe is communicated with particular circumſtances to the alimentary canal; or how the affection of this, riſing upwards, affects the brain, ſo as to occaſion the particular convulſions which occur in this diſeaſe, I cannot pretend to explain.

But, although I cannot trace this diſeaſe to its firſt cauſes, or explain the whole of the phaenomena, I hope, that, with reſpect to the general nature of the diſeaſe, I may form ſome general concluſions, which may ſerve to direct our conduct in the cure of it.

MCCCCLXV.

Thus, from a conſideration of the predispponent and occaſional cauſes, it will, I think, appear, that the chief part of the proximate cauſe is a mobility of the ſyſtem, depending generally upon its plethoric ſtate.

MCCCCLXVI.

Whether this diſeaſe ever ariſe from a mobility of the ſyſtem, independent of any plethoric ſtate of it, I cannot poſitively determine; but, in many caſes that have ſubſiſted for ſome time, it is evident that a ſenſibility, and, conſequently, a mobility, are acquired, which often appear when neither a general plethora can be ſuppoſed to ſubſiſt, nor an occaſional turgeſcence to have happened. However, as we have ſhown above that a diſtenſion of the veſſels of the brain ſeems to occaſion epilepſy, and that a turgeſcence of the blood in the veſſels of the lungs ſeems to produce aſthma, ſo analogy leads me to ſuppoſe, that a turgeſcence of blood in the uterus, or in other parts of the genital ſyſtem, may occaſion the ſpaſmodic and convulſive motions which appear in hyſteria. It will, at the ſame time, be evident, that this affection of the genitals muſt eſpecially occur in plethoric habits; and every circumſtance mentioned in the hiſtory of the diſeaſe ſerves to confirm this opinion as to its proximate cauſe.

MCCCCLXVII.

From this view of the ſubject, the analogy of hyſteria and epilepſy will readily appear; and why, therefore, we are to ſay that the indications of cure are the ſame in both.

As the indications, ſo the ſeveral means of anſwering them, are ſo much the ſame in both diſeaſes, that the ſame obſervations and directions, with regard to the choice and employment of theſe remedies, that have been delivered above on the ſubject of epilepſy, will apply pretty exactly to hyſteria, and, therefore, need not be repeated here.

CHAP. XIV.

OF CANINE MADNESS

AND

HYDROPHOBIA.

MCCCCLXVIII.

This diſeaſe has been ſo exactly and fully deſcribed in books that are in every body's hands, that it is on no account neceſſary for me to give any hiſtory of it here; and, with reſpect to the pathology of it, I find that I can ſay nothing ſatisfying to myſelf, or that I can expect to prove ſo to others. I find alſo, with reſpect to the cure of this diſeaſe, that there is no ſubject in which the fallacy of experience appears more ſtrongly than in this. From the moſt antient times to the preſent, many remedies for preventing and curing this diſeaſe have been recommended, under the ſanction of experience, and have, perhaps, alſo kept their credit for ſome time; but ſucceeding times have generally, upon the ſame ground of experience, deſtroyed that credit entirely; and moſt of the remedies formerly employed are now fallen into abſolute neglect. In the preſent age, ſome new remedies have been propoſed, and have experience alledged to vouch for their efficacy; but many doubts ſtill remain with reſpect to that; and, though I cannot judge in this matter from my own experience, I think it incumbent on me to give to my pupils the beſt judgement I can form with reſpect to the choice of the remedies at preſent recommended.

MCCCCLXIX.

MCCCCLXIX.

I am, in the firſt place, firmly perſuaded, that the moſt certain means of preventing the conſequences of the bite, is to cut out, or otherwiſe to deſtroy the part in which the bite has been made. In this every body agrees, but with this difference, that ſome are of opinion that it can only be effectual when it is done very ſoon after the wound has been made, and they therefore neglect it when this opportunity is miſſed. There have been, however, no experiments made proper to determine this matter; and there are many conſiderations which lead me to think, that the poiſon is not immediately communicated to the ſyſtem, and, therefore, that this meaſure of deſtroying the part may be practiſed with advantage, even many days after the bite has been given.

MCCCCLXX.

Whilſt the ſtate of our experience, with reſpect to ſeveral remedies now in uſe, is uncertain, I cannot venture to aſſert that any of theſe is abſolutely ineffectual; but I can give it as my opinion, that the efficacy of mercury, given very largely, and perſiſted in for a long time, both as a means of preventing the diſeaſe, and of curing it when it has actually come on, is better vouched by experience than that of any other remedy now propoſed, or commonly employed.

END OF THE THIRD VOLUME.

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